



Seattle CIREN Outreach across

Presen

Ph.D.

Seattle CIREN

Harborview Tracking

Novem

Total M 43

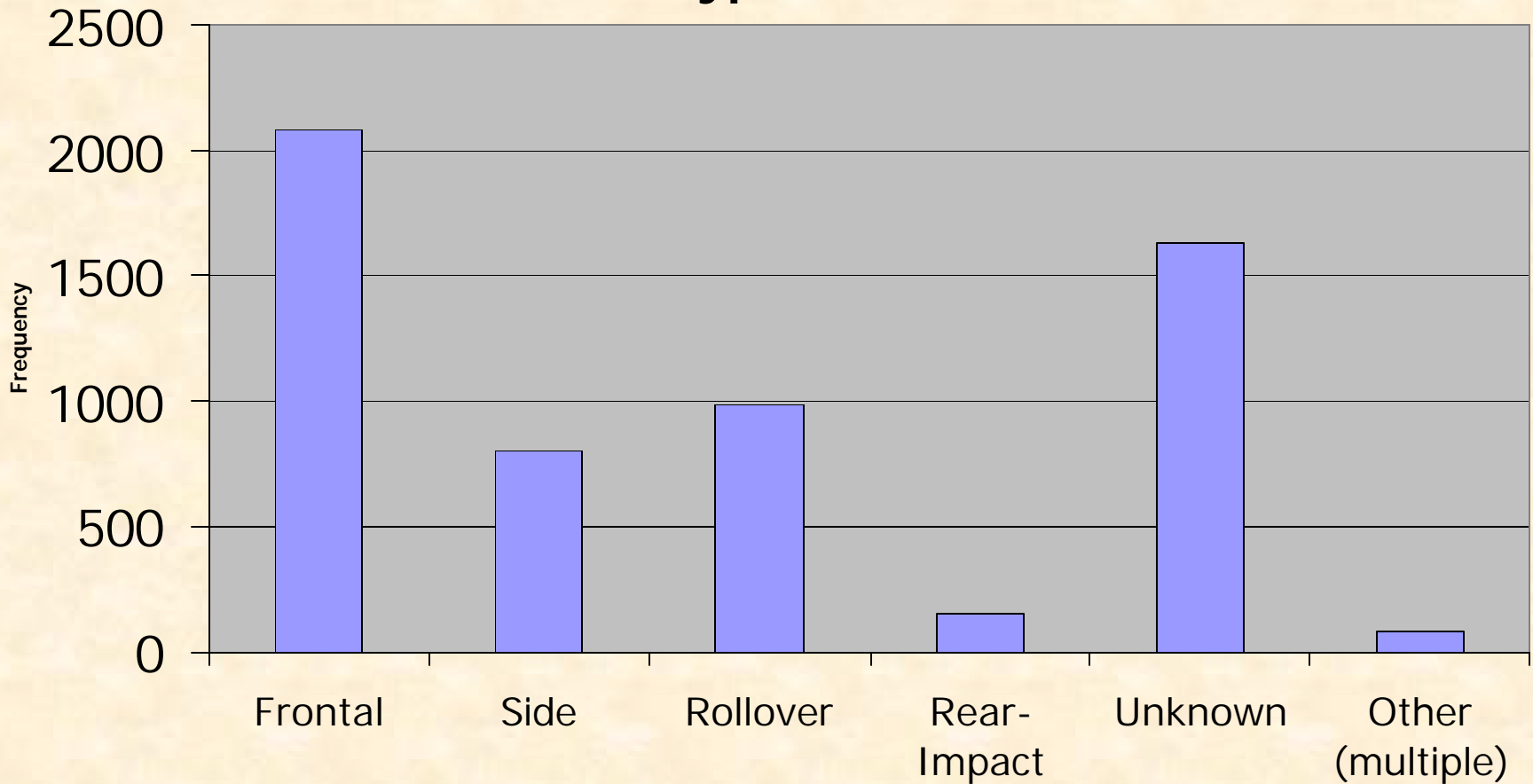
Total C 9

Total C 0

Total CIREN cases utilized in Outreach - **119**

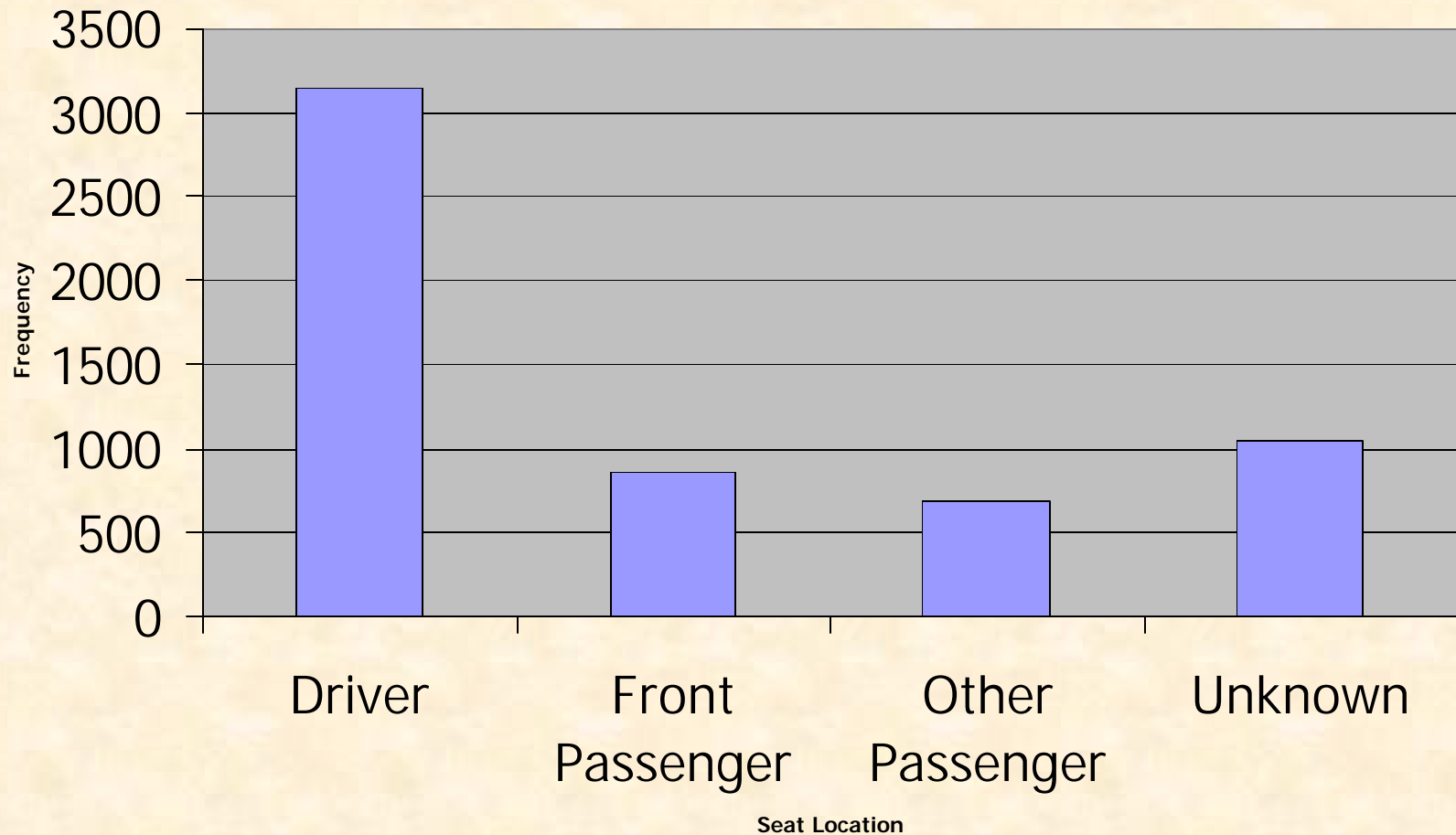
Seattle CIREN - Tracking Data

Crash Type Distribution



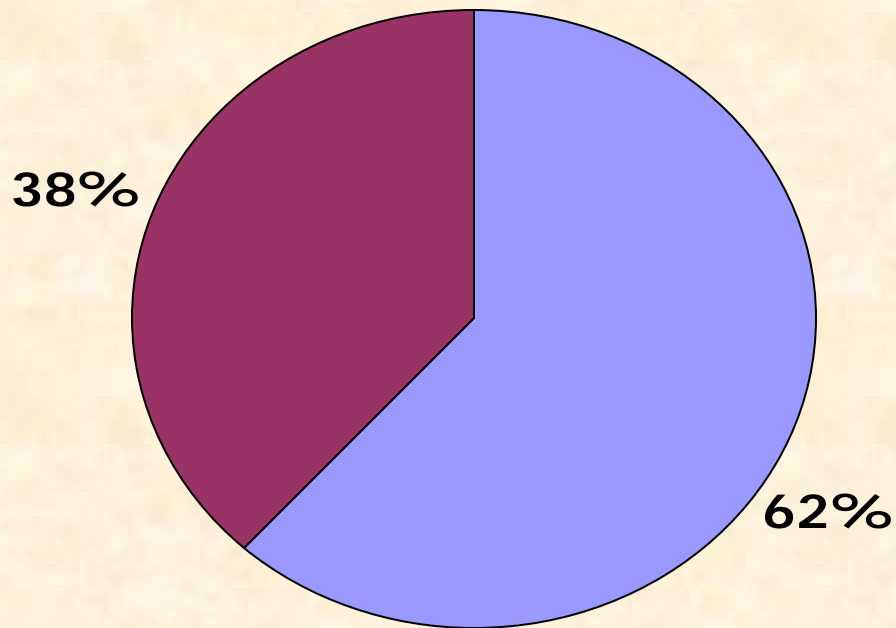
Seattle CIREN - Tracking Data

Seat Location Distribution



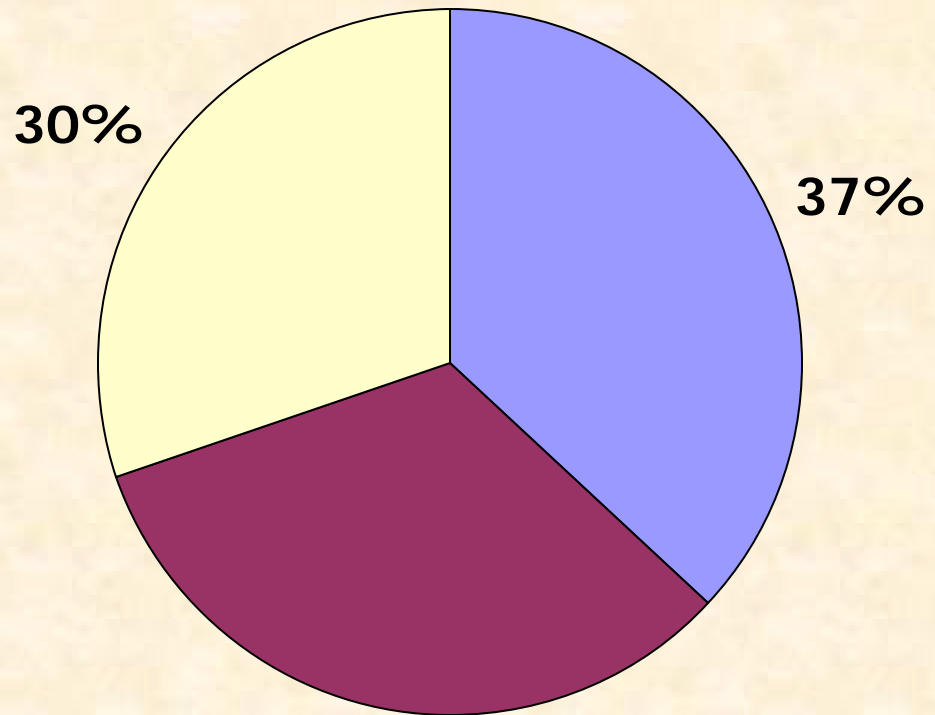
Seattle CIREN - Tracking Data

Sex Distribution



■ Males ■ Females

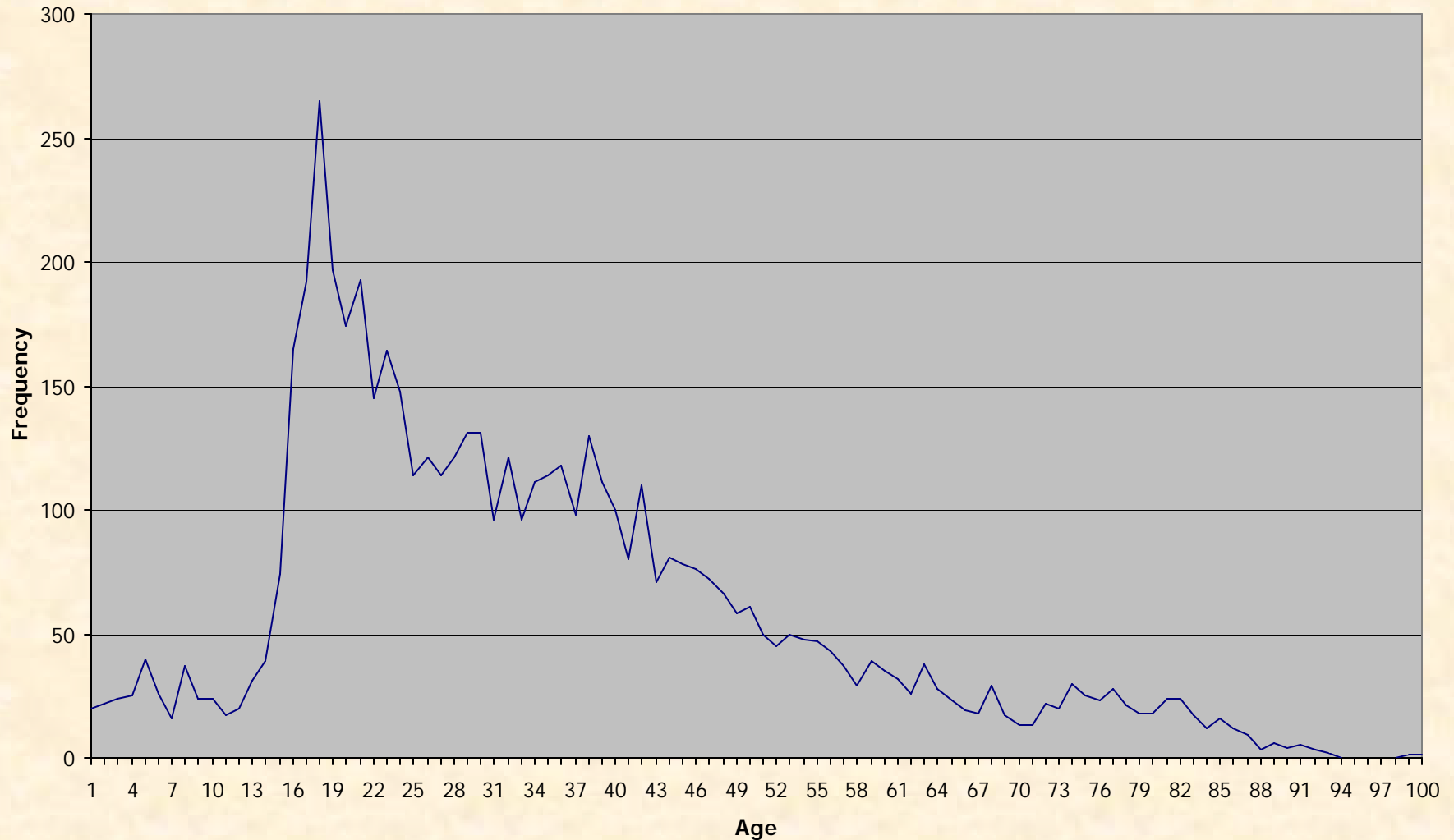
Restrained?



■ Yes ■ No ■ Unknown

Seattle CIREN - Tracking Data

Age Distribution

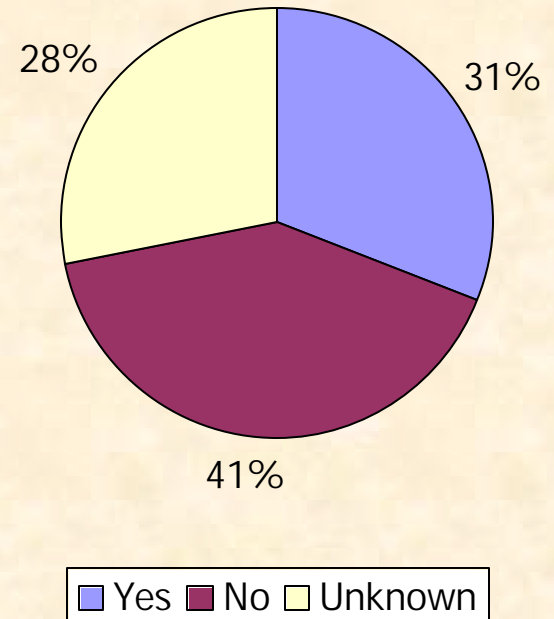


Seattle CIREN - Tracking Data

Age Distribution for Ages 16-21



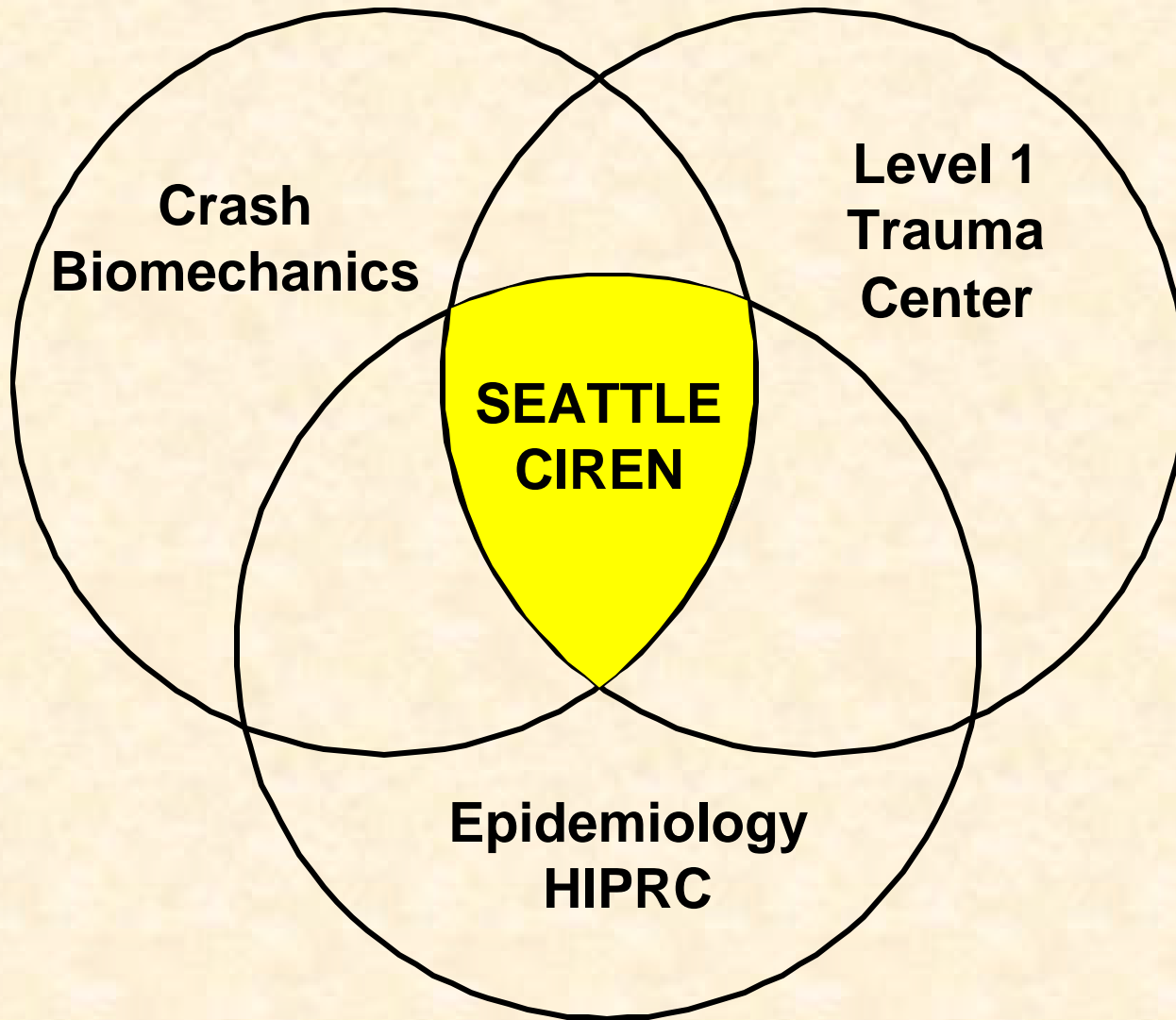
16-21 Restraint Use



Total for group = 1186 (31%)

Seattle CIREN Public Outreach

- “The ...”
 - Targeted
 - Science
 - P
 - Emj
 - Trai
 - CIR
 - Five high schools - 1000 kids
 - Evaluation successfully led to significant changes in safety knowledge and reported behaviors



Seattle CIREN National Outreach

HIPRC CIREN 11/11/11

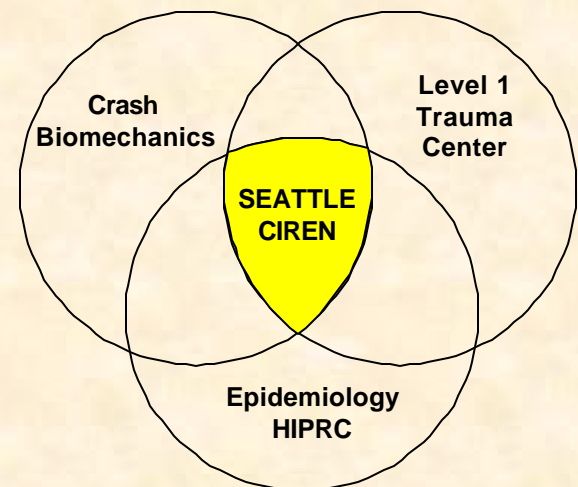
“Effectiveness of
Koepsell, C

“Relationships
injury in M

“Estimating the loads in in femurs....” Tencer, Kaufman et al.
AA&P in press

“Correlation of head injuries to contacts in MVC”
Nirula et al. (submitted)

vara,



Seattle CIREN National Outreach

HIPRC Publications in the works

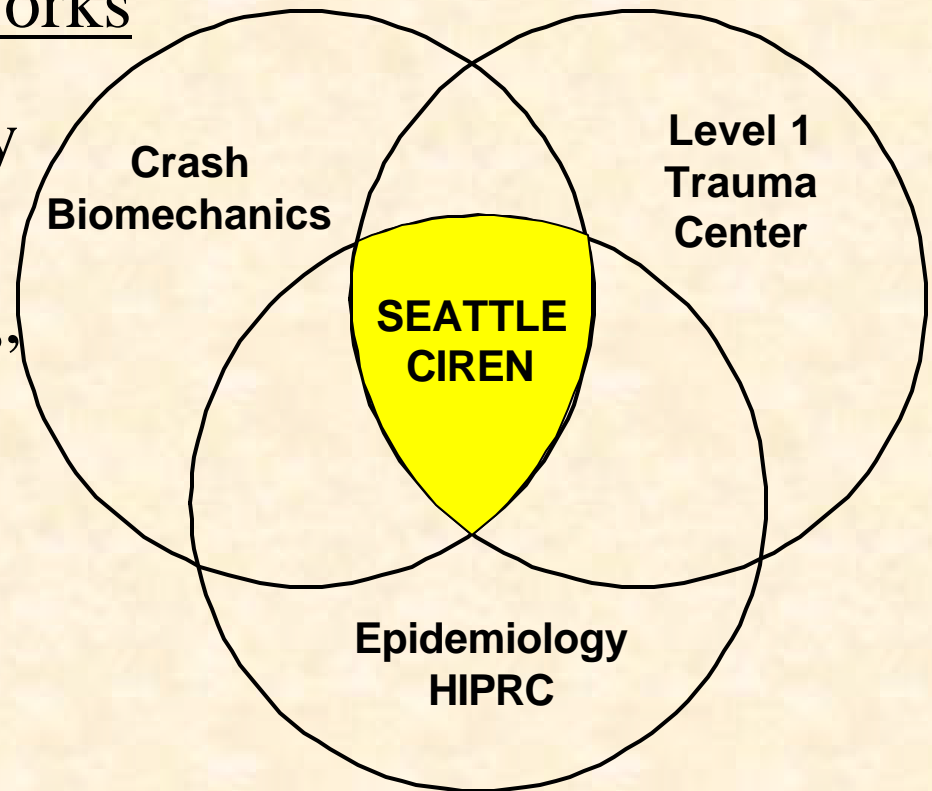
“Door stiffness and geometry in side impacts...”

“HIC vs. Real world crashes”

“Seat failures”

“Entrapment in crashes”

“Children and booster seats”



Seattle CIREN National Outreach

10)

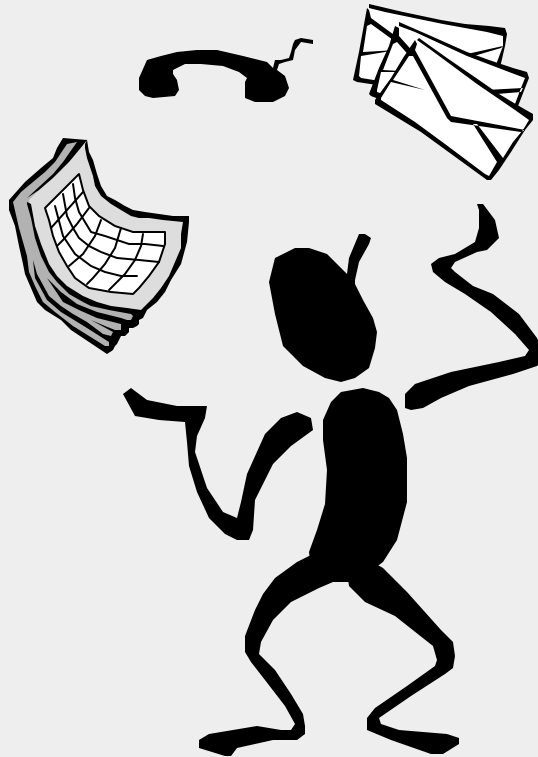
ogies (300)

Conf. -

CIREN 1st, 2nd, 3rd Annual Conferences

CIREN NHTSA Public Meetings

Seattle CIREN OT



Seattle CIREN

Outreach and **T**raining

Seattle CIREN -Target Audiences

- Surgeons/ER Staff/ Trauma Conferences (10)
- Trauma Nurses/ Airlift NW/ Community Programs (4)
- Medics/EMS Local, County, State, & Regional Conferences (9)
- Medical Examiners (3)
- Engineers/Auto manufacturers (5)
- NHTSA/Government - CIREN Public meetings (8)
- Traffic Safety/Interest Groups (3)
- Public Safety/Interest Groups (4)
- State DOT conferences (8)
- Law Enforcement/Recons (4)
- Law Enforcement/Officers (3)
- Public / High Schools (6)

Seattle CIREN

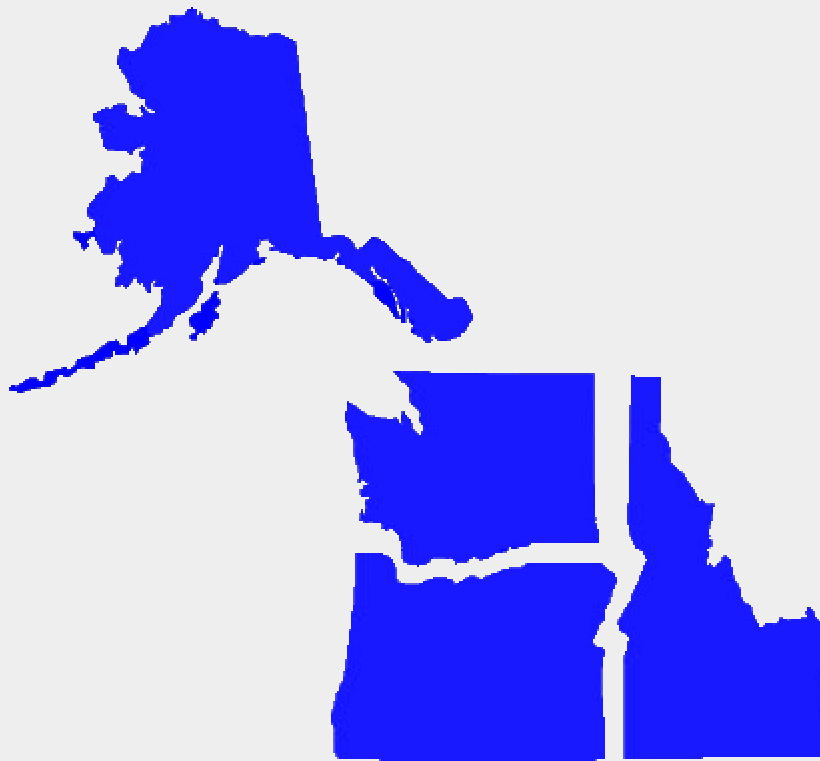
Total Events = 67

(Jan. '99 - Fall 2001)

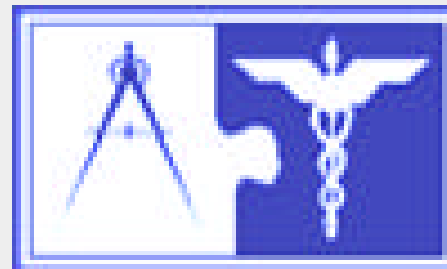
Seattle CIREN Presentation Titles

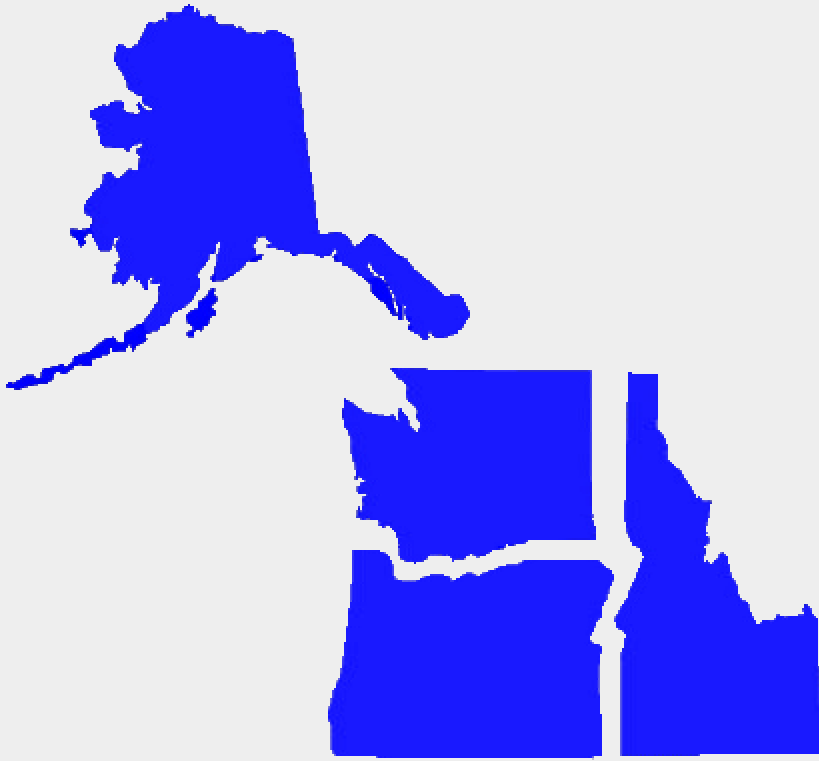
(all presentations are approximately one hour in length)

- CIREN intro / “Pony” show / Injury mechanisms
- Crash Course in Kinematics
- Knee bolsters and leg fractures
- “Bad to Bone” - All fracture patterns/directions of force
- Children & Crashes
- Rotational Forces in Crashes
- “Kinematics for Dummies”/ Restraint Technologies
- Door panel stiffness/geometry and injuries in side impacts
- AIS - Injury severity in crashes - Use of AIS for all
- Frontal Offsets - FLEEs and SUVs
- Assessing injury patterns in an MVC / INTRUSION = INJURY!!
- “The Force Is With You”



Seattle CIREN Outreach Across NHTSA Region X



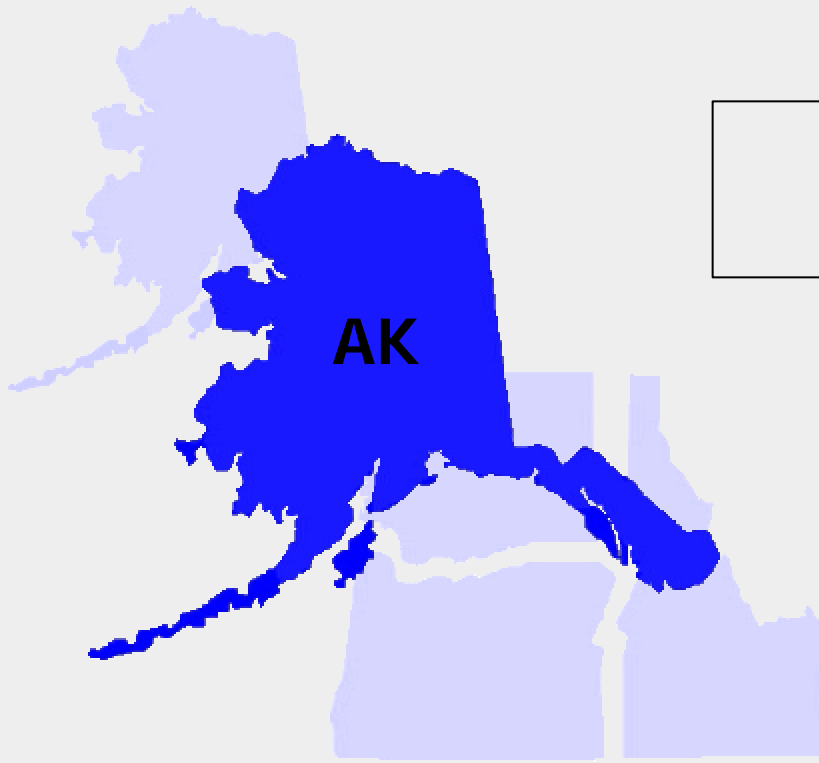


Seattle CIREN Outreach Across NHTSA Region X

NHTSA Region X All Hands Meeting, Seattle Federal Building

- All State DOT staff from all states in region attend

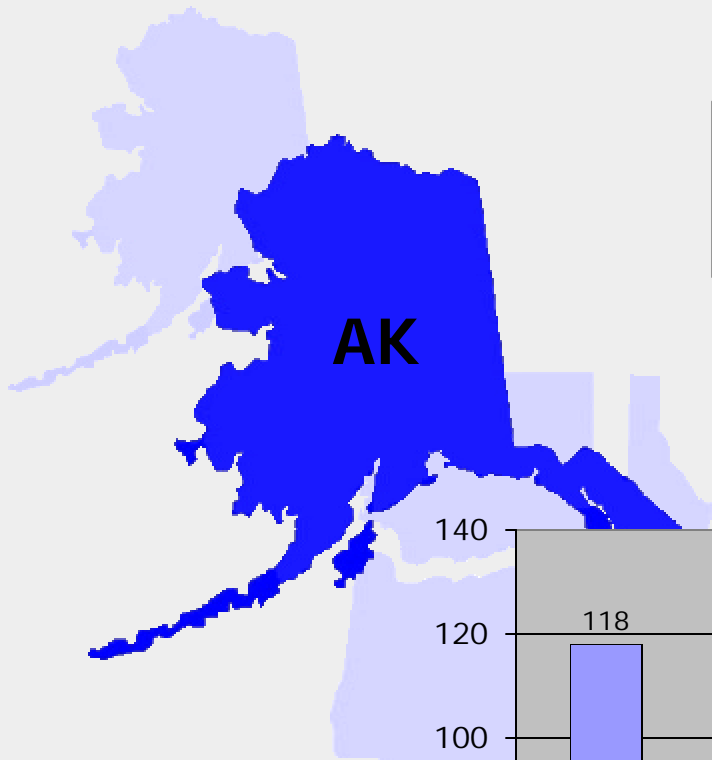
May 2000 - 3 Hour presentation, Kinematics, AIS, Bad to Bone, case reviews, air bag technologies



ALASKA

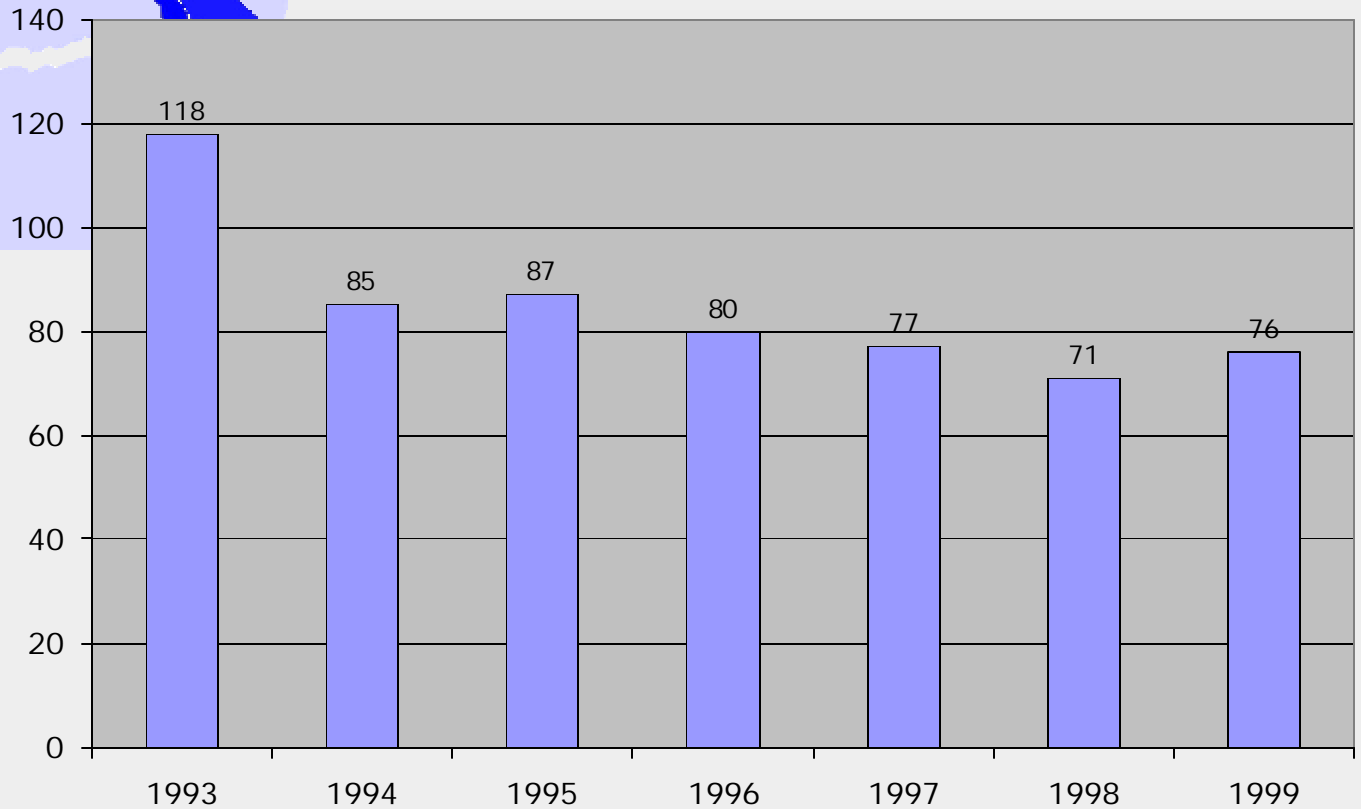
State Seat Belt Law

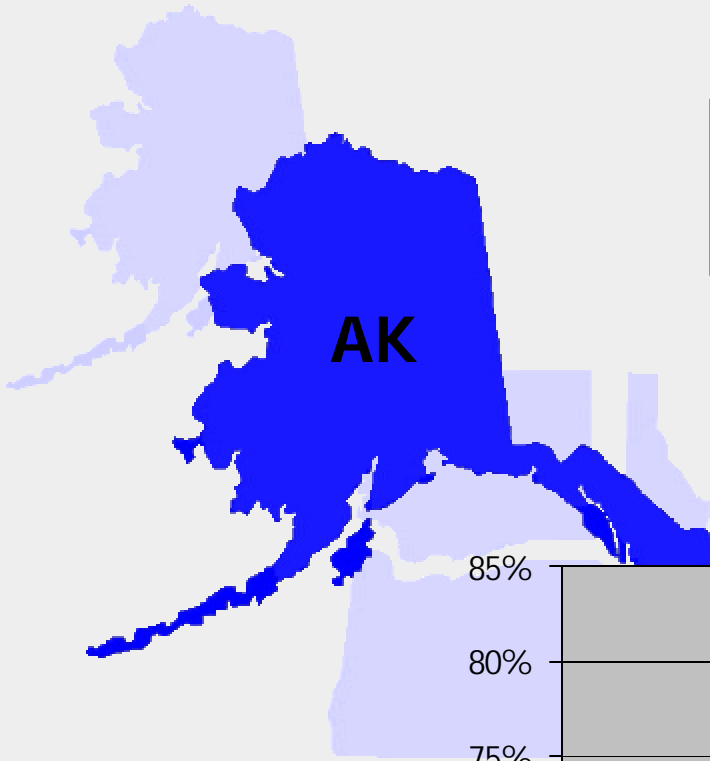
- Effective 09/12/1990
- Secondary Enforcement
- Seats:
 - All
- Exempt Vehicles:
 - School buses
- \$15 Fine



ALASKA

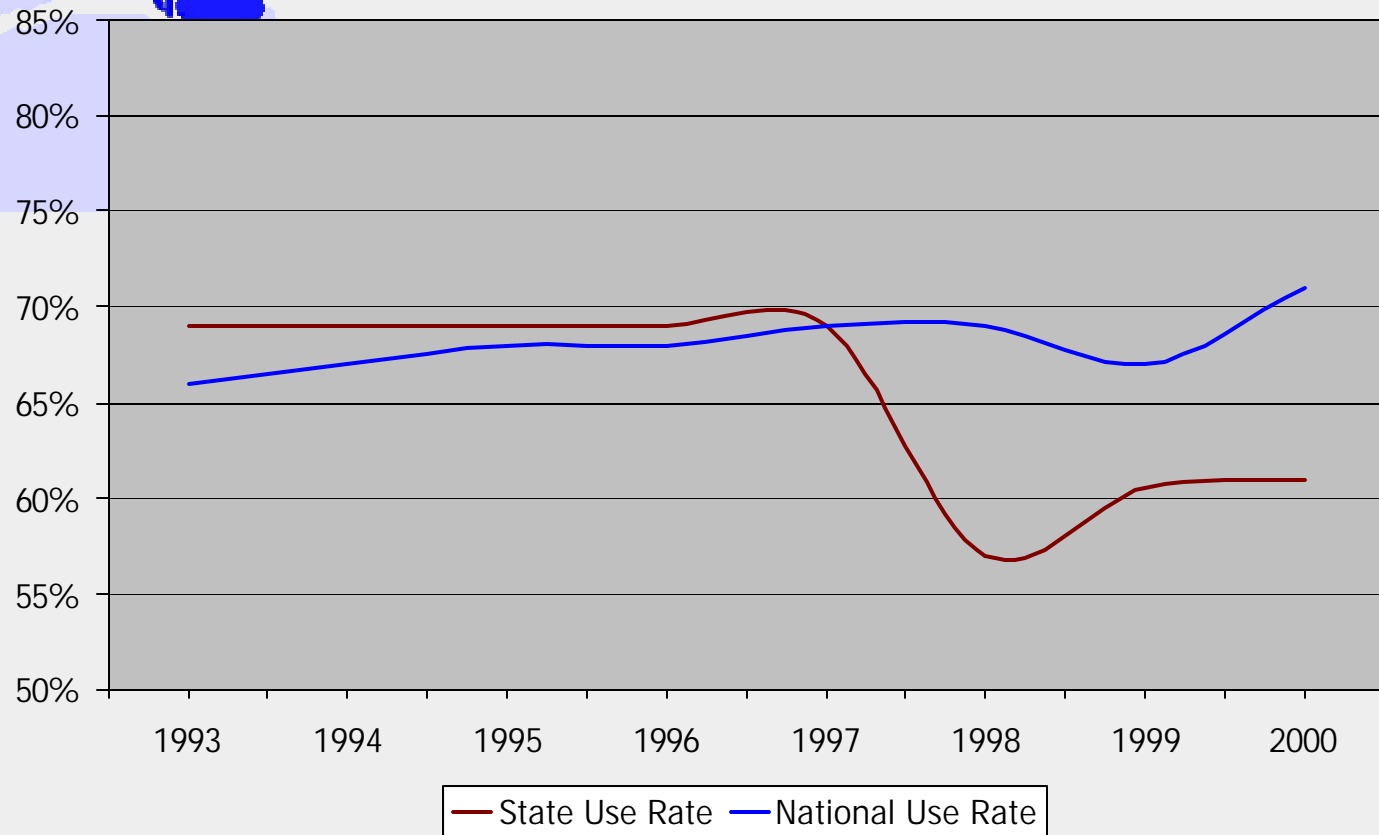
Alaska Traffic Fatalities





ALASKA

Alaska Restraint Use Rates





ALASKA

AK Buckle Up Summit

Police, DOT, Public Safety, Media
Attention

(100) May 2000 - CIREN Intro,
Kinematics, Restraint Use (90min.)

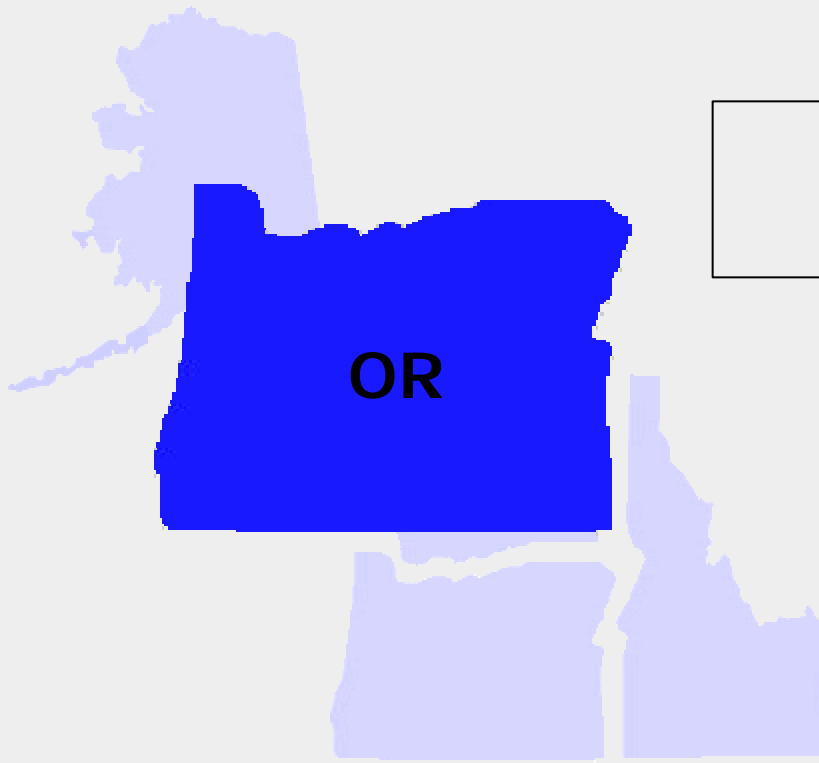
(100) May 2001 - Children &
Crashes (90 min.)

(500) October 2001 - Trans-Tech Conference

Lunch Keynote Speaker/ Afternoon Workshop
Restraint Technologies/ Crash Course in Kinematics (90, and 75 min.)

(200) November 2001 - EMS Symposium- Medic/Med. Staff

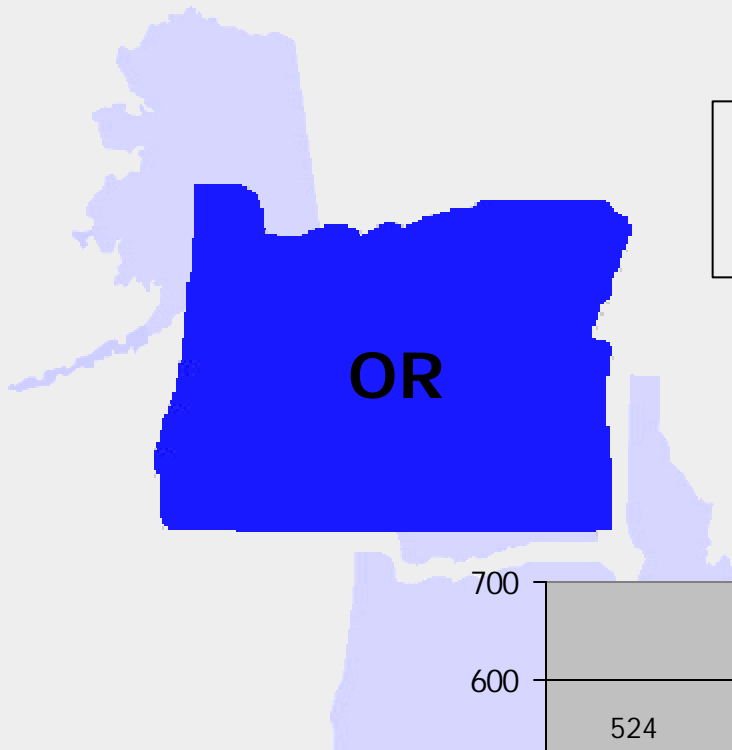
Occ. Kinematics and Restraint Tech., and Bad to Bone. (90
min)



OREGON

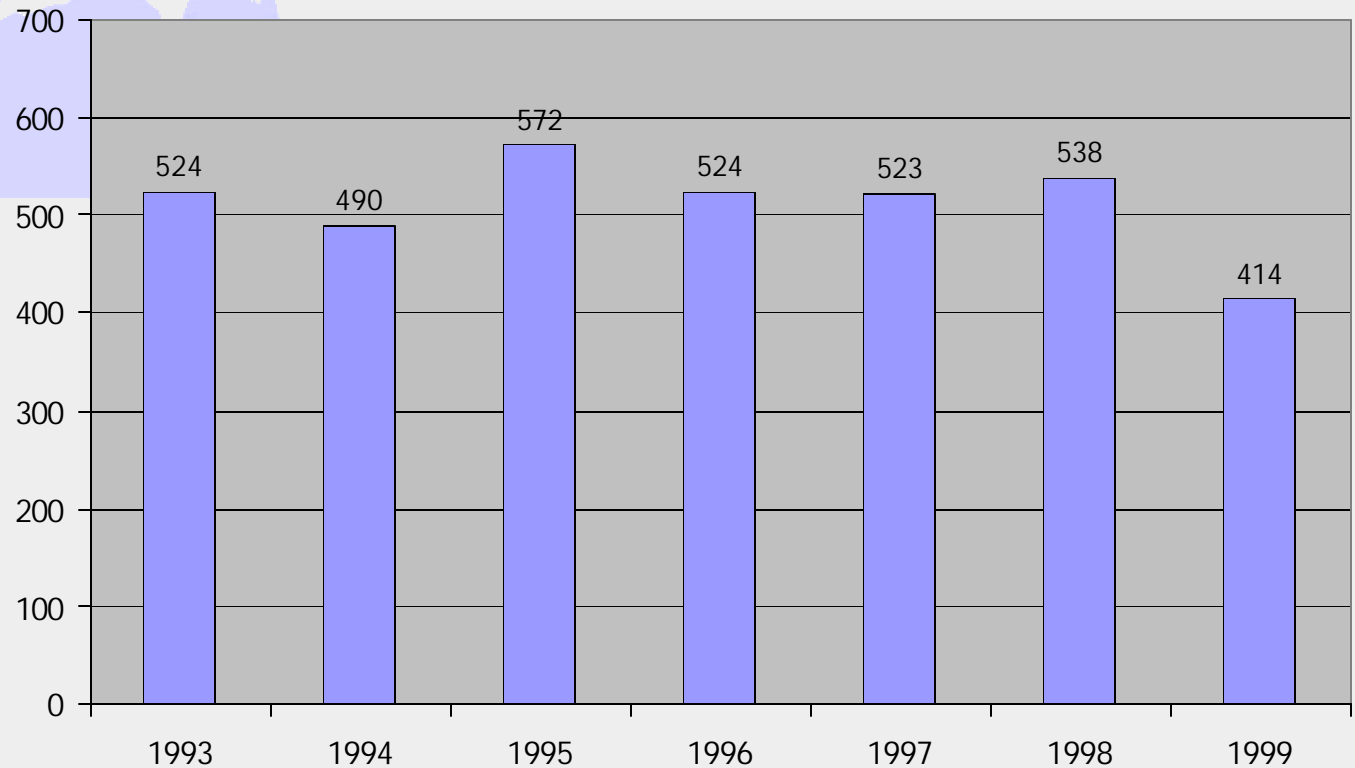
State Seat Belt Law

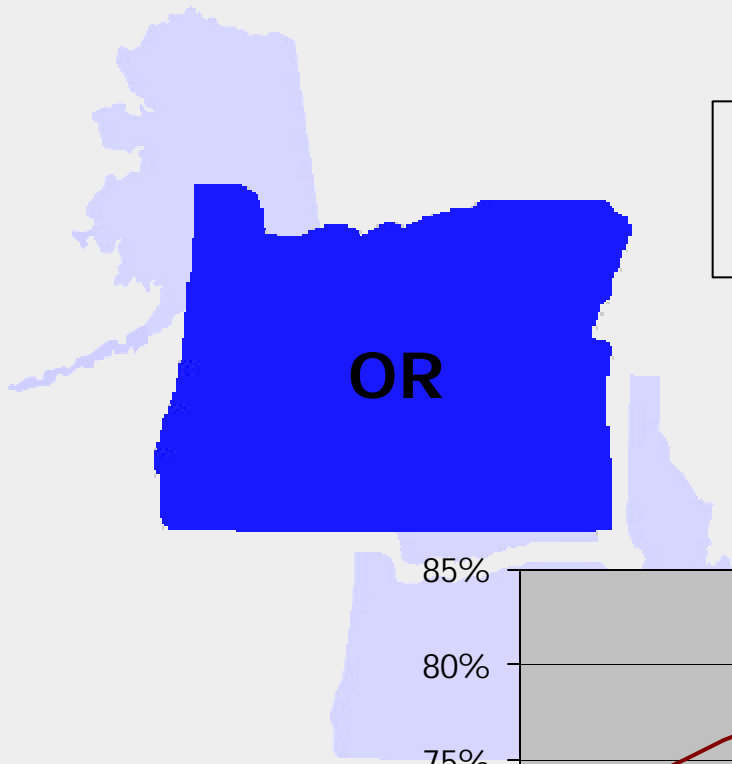
- Effective 12/07/1990
- Primary Enforcement
- Seats:
 - All
- Exempt Vehicles:
 - NONE
- \$75 Fine
 - Highest Fine in Country



OREGON

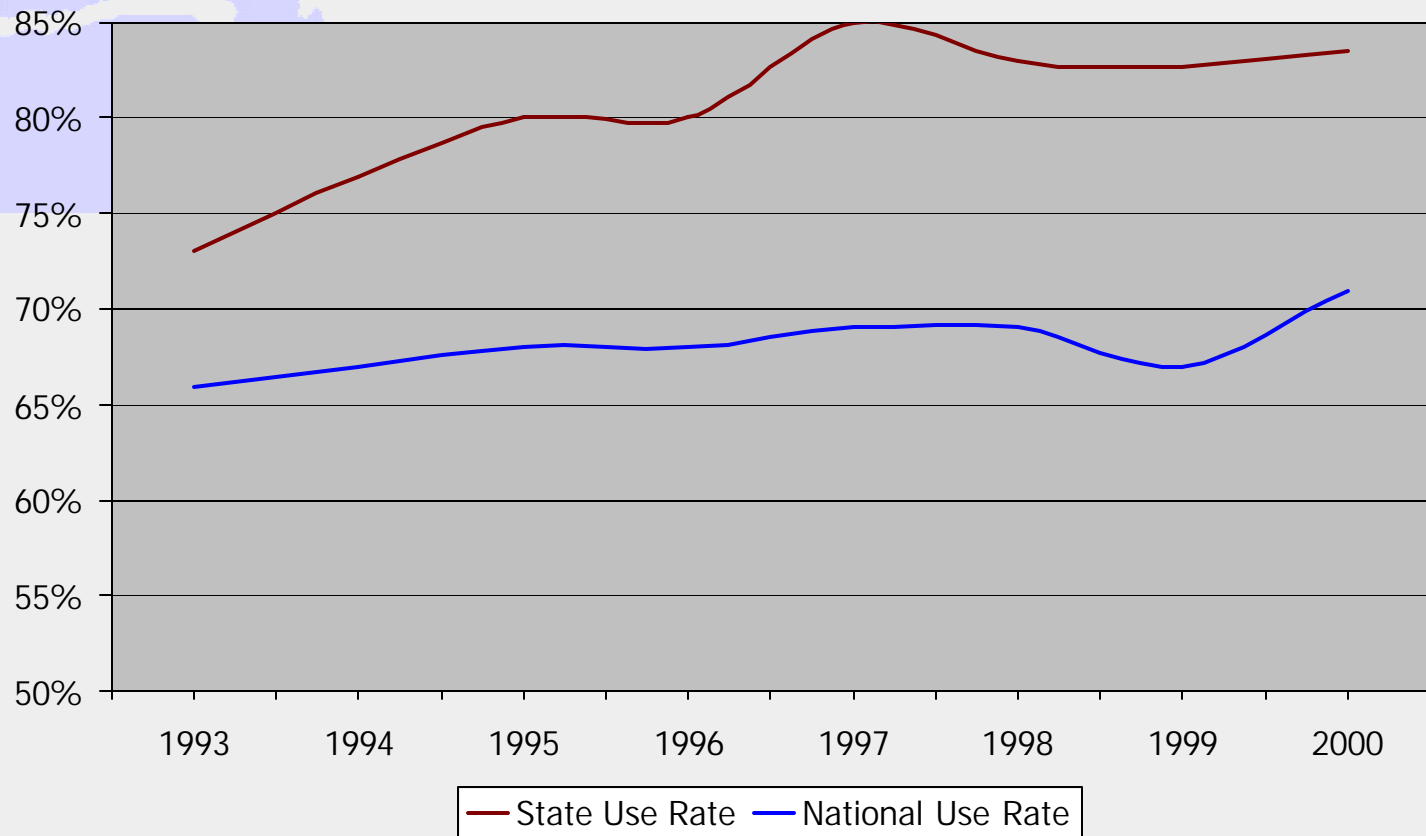
Oregon Traffic Fatalities





OREGON

Oregon Restraint Use Rates





OR

OREGON

Oregon Transportation & Safety Conference

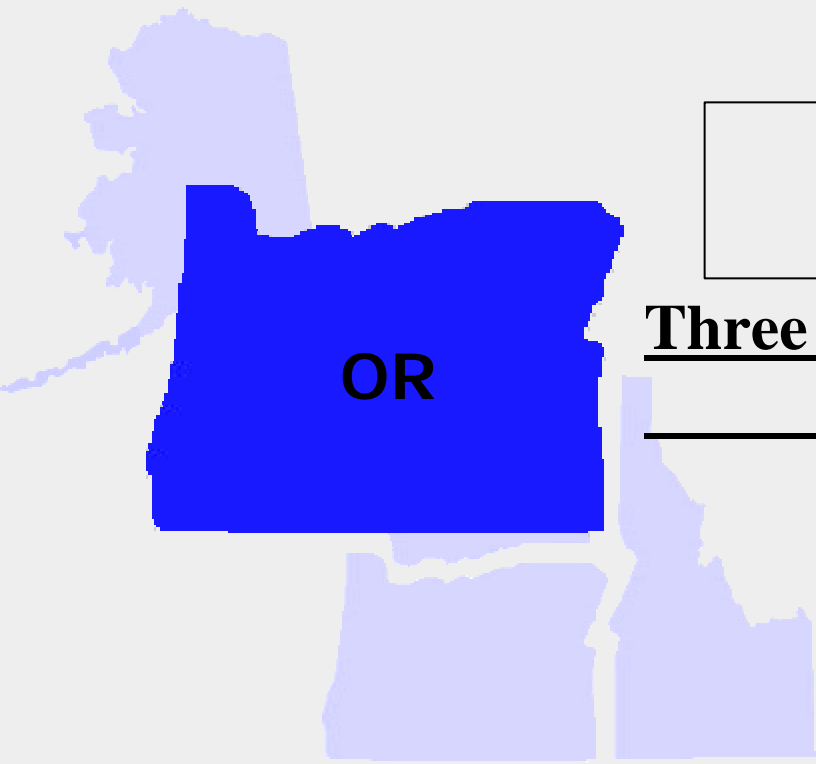
DOT, Public Safety, Police, Medical
Community, NHTSA, other states

Workshops sessions

(50) October 1999 - CIREN Introduction, Injury Mechanisms,
Case Reviews, Airbag Technologies - 75 min.

(50) October 2000 - “Kinematics for Dummies” - 75 min.

(50) October 2001 (2 sessions) - Occupant Kinematics and
Restraint Tech. & Children and Crashes - 2 @ 75 min.



OREGON

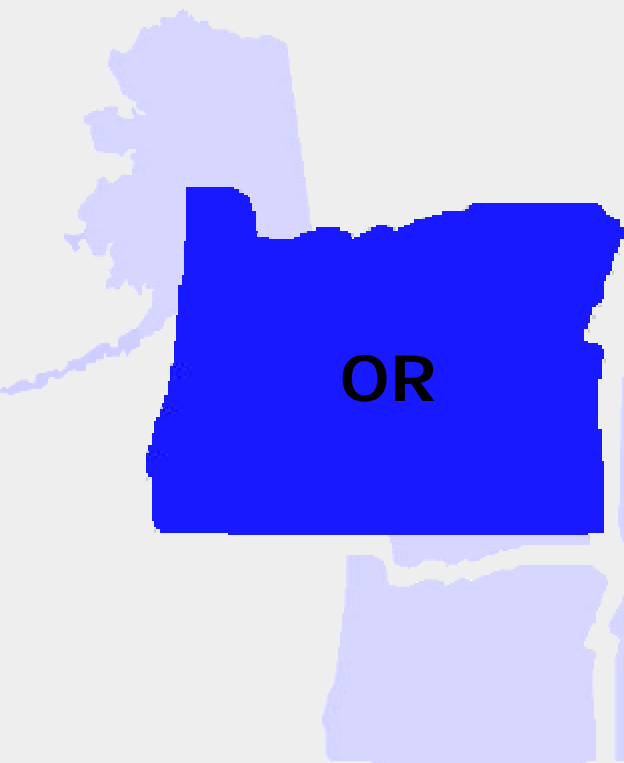
Three Flags (B.C., WA, OR)

International Law Enforcement Occupant Protection Program

Two officers from each jurisdiction in the state attend. Saturation patrols, PSA taping, guest speakers on seatbelt topics

(150) January 1999 - CIREN Intro, Injury mechanisms, case reviews, air bag technologies - 90 min.

(150) January 2001 - Crash Course in Kinematics - Rotational Forces/Unrestrained vs. Restrained - 90 min.



OREGON

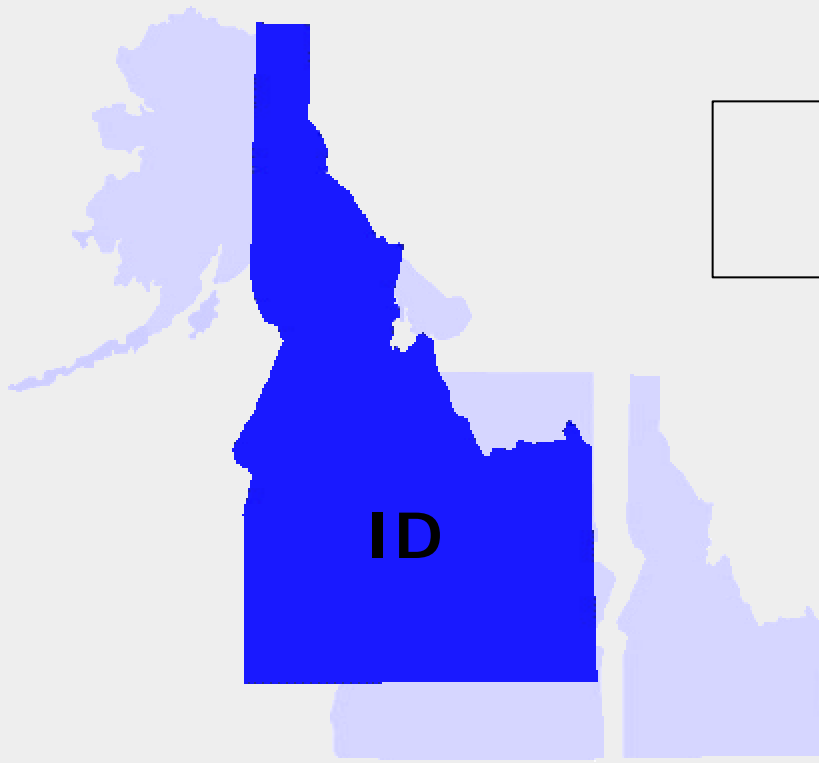
Child Safety Technician Training - ACTS

_____ ACTS Oregon - Alliance Coalition for
Traffic Safety (state funded) _____

_____ Regional Update training throughout the
state - guest speakers_

(50) December 2000 - Children & Crashes lecture -75 min.

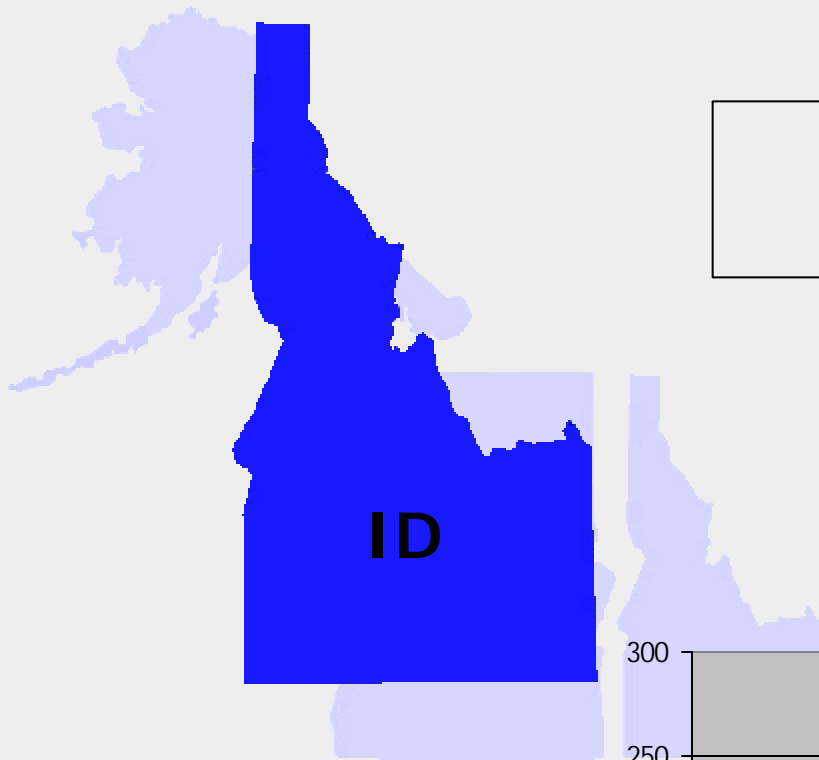
(50) Planned Fall 2001 - Children & Crashes lecture - 75 min.



IDAHO

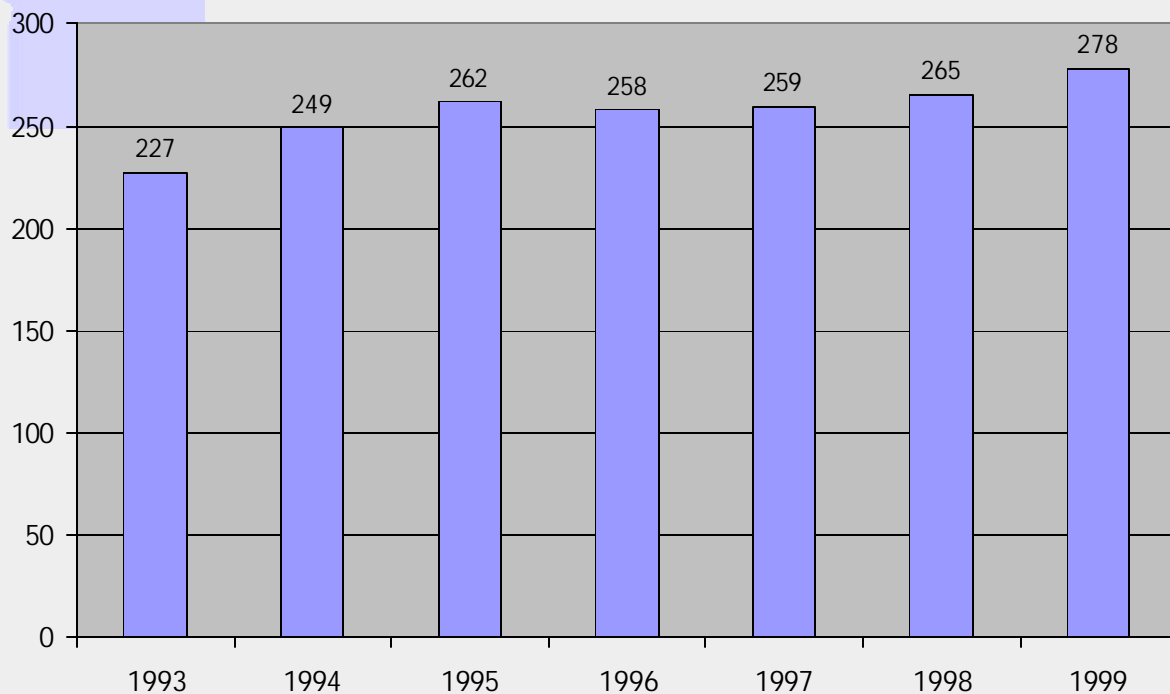
State Seat Belt Law

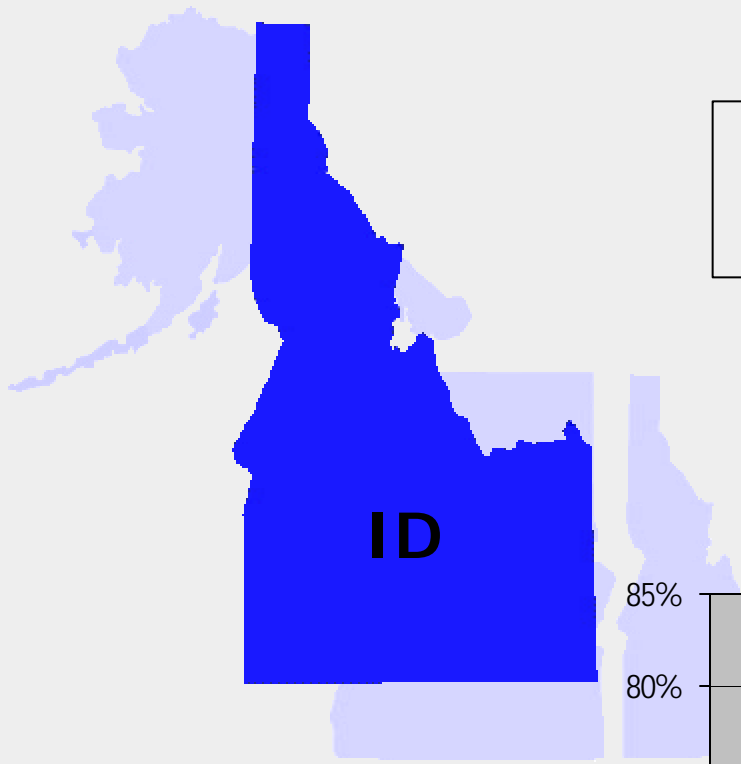
- Effective 07/01/1986
- Secondary Enforcement
- Seats:
 - Front Only
- Exempt Vehicles:
 - Over 8,000 lbs.
- \$5 Fine



IDAHO

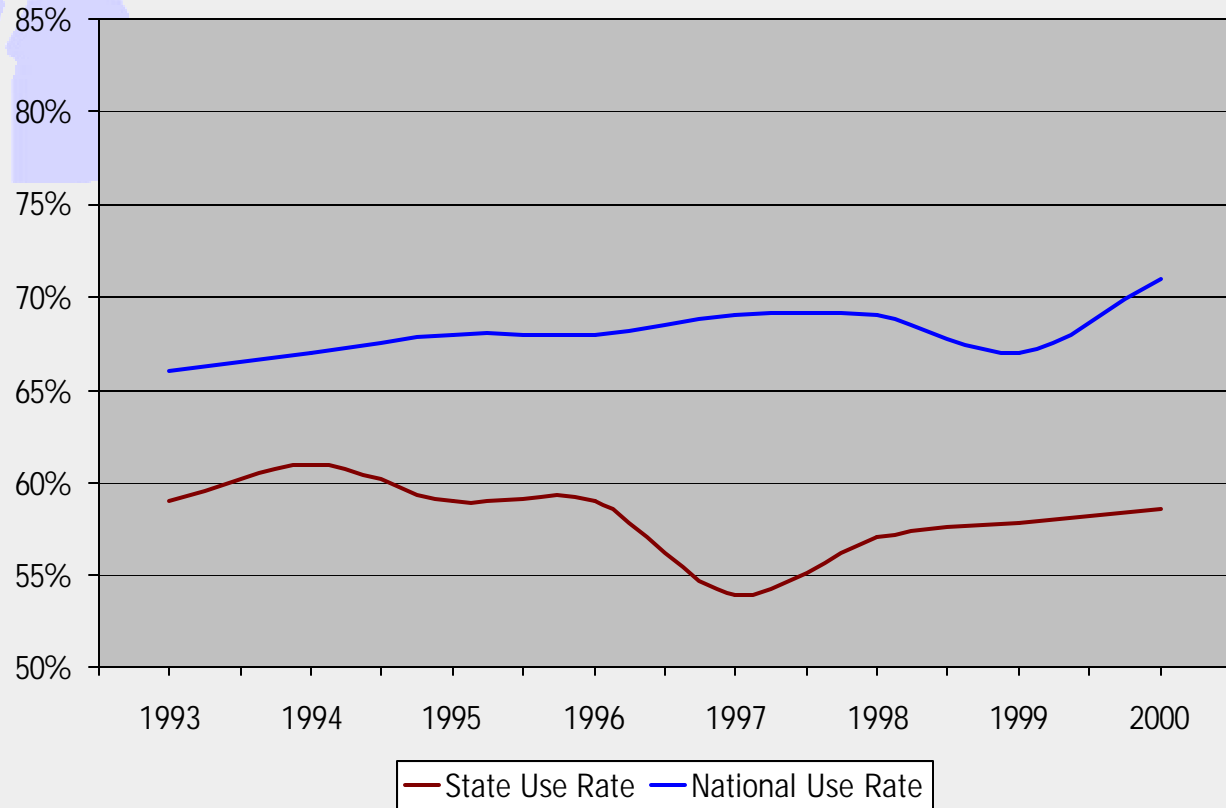
Idaho Traffic Fatalities

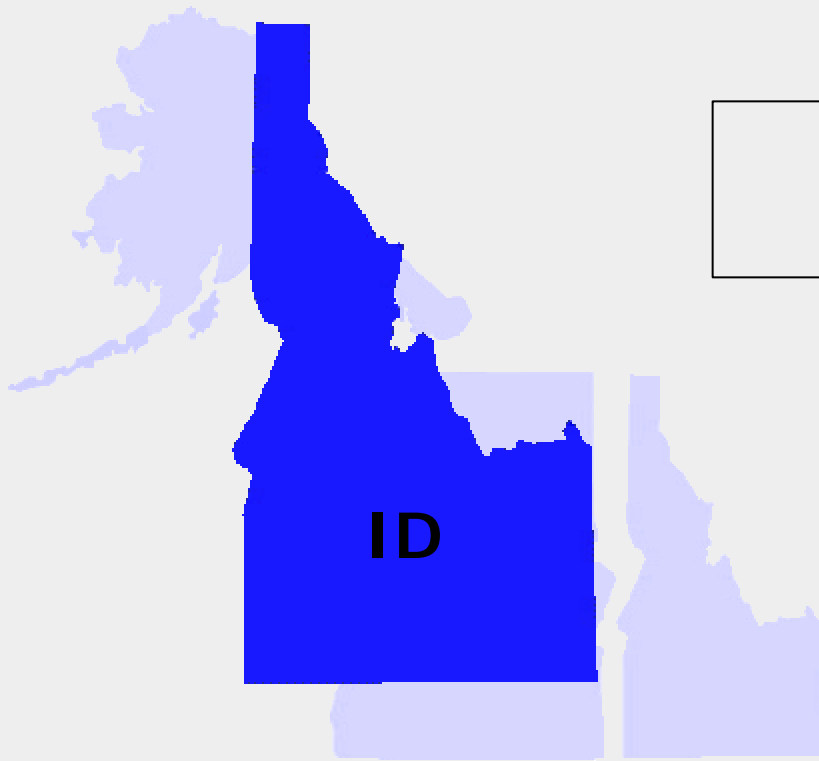




IDAHO

Idaho Restraint Use Rates





IDAHO

Start Smart Buckle up! Summit

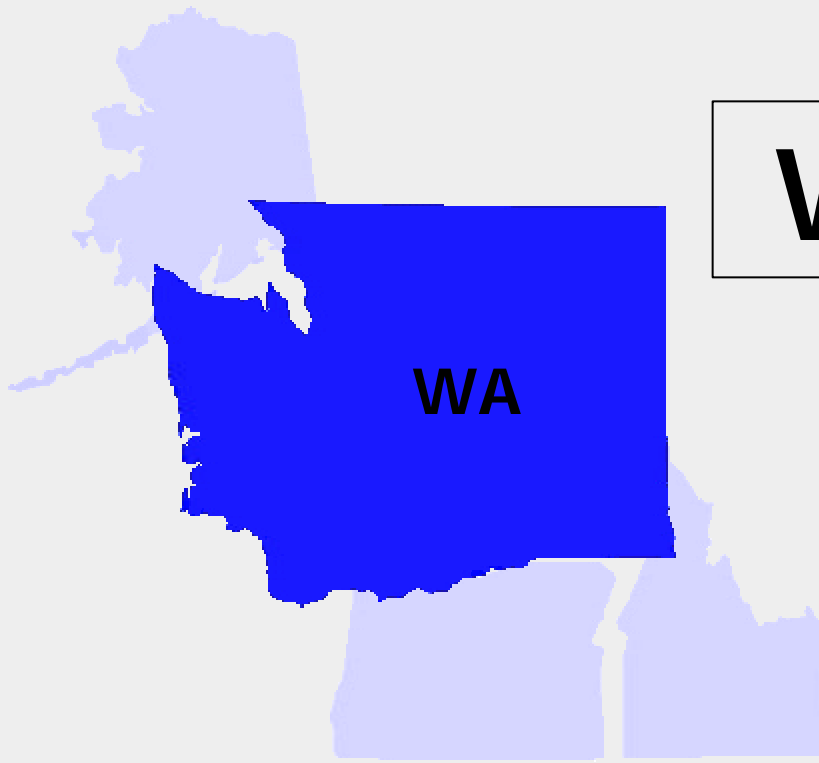
Law Enforcement Occupant
Protection Program/Saturation
Patrols

Also, includes Public Safety
groups, DOT, and media attention

(200) February 2000 (1st ever)- Intro. to CIREN, Injury
mechanisms, case reviews, rotational forces - 2 hours

(200) July 2000 - Keynote speaker / Kinematics for
Dummies, AIS, Unrestrained vs. Restrained. - 3 hours

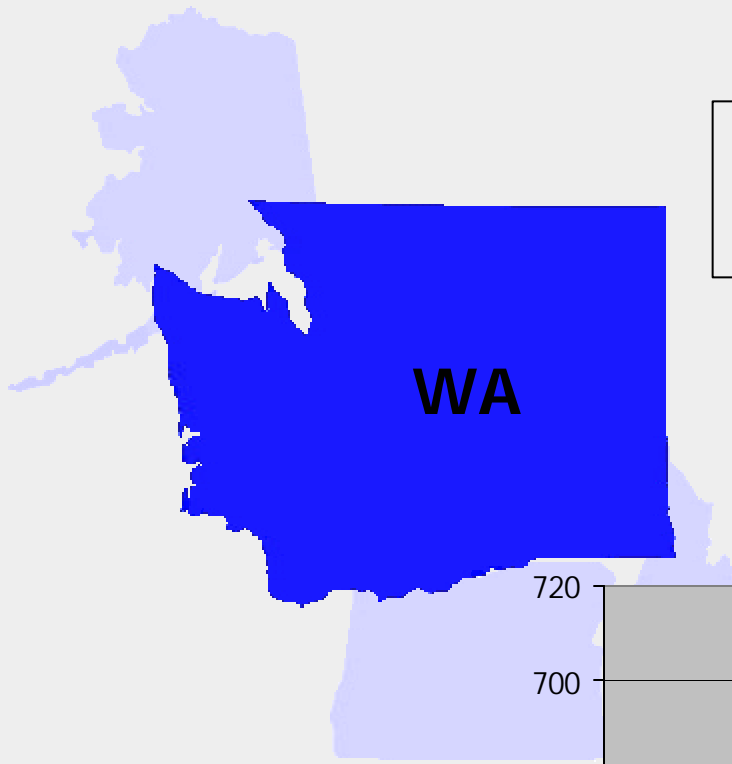
(200) Sept 2001 - Asked back again this fall!



WASHINGTON

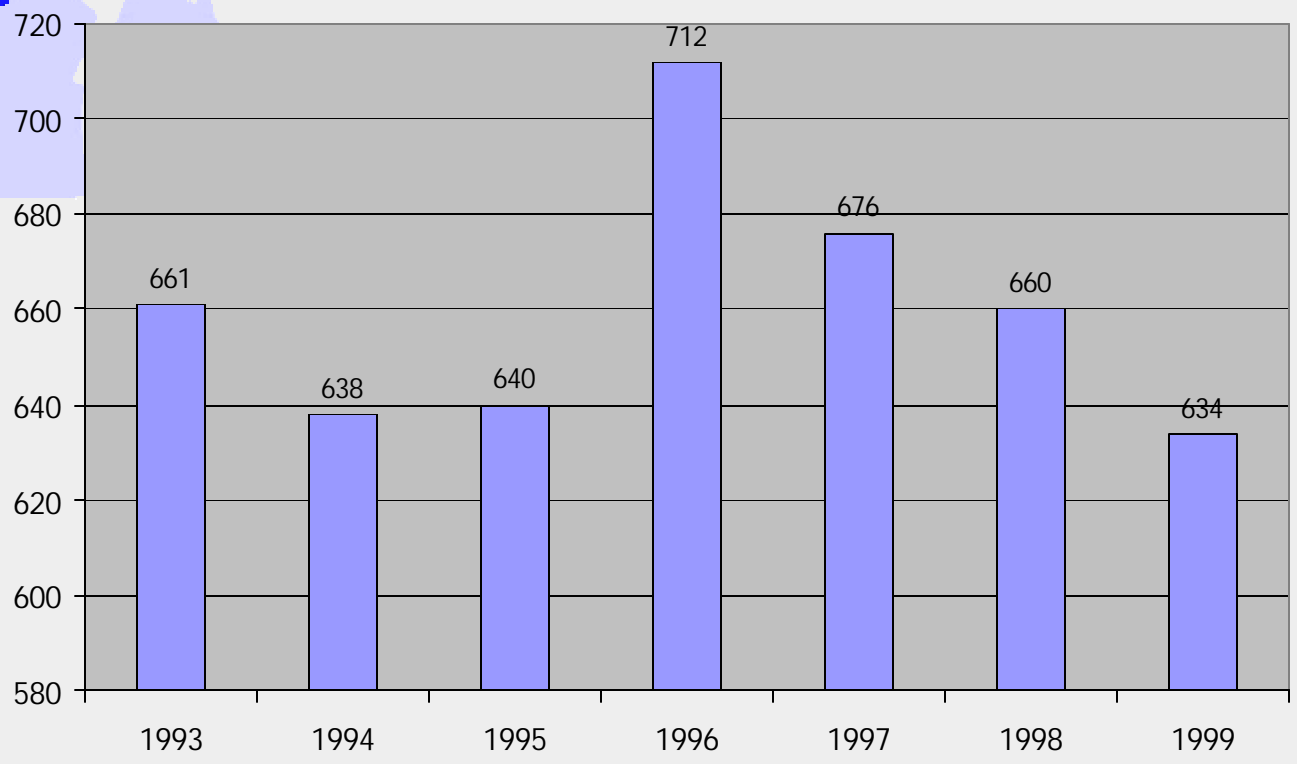
State Seat Belt Law

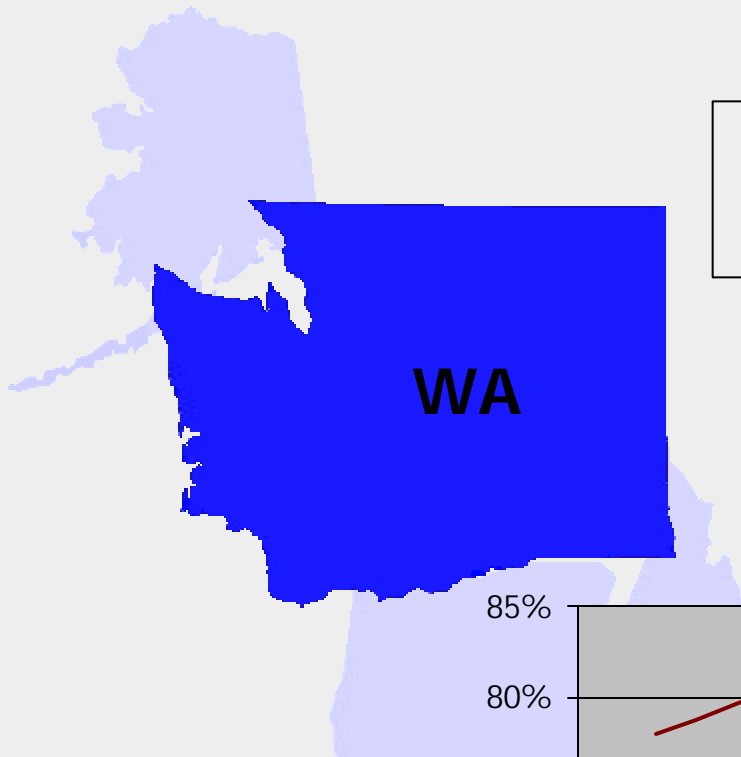
- Effective 06/11/1986
- Secondary Enforcement
- Seats:
 - All
- Exempt Vehicles:
 - Designed for more than 10 people
- \$35 Fine



WASHINGTON

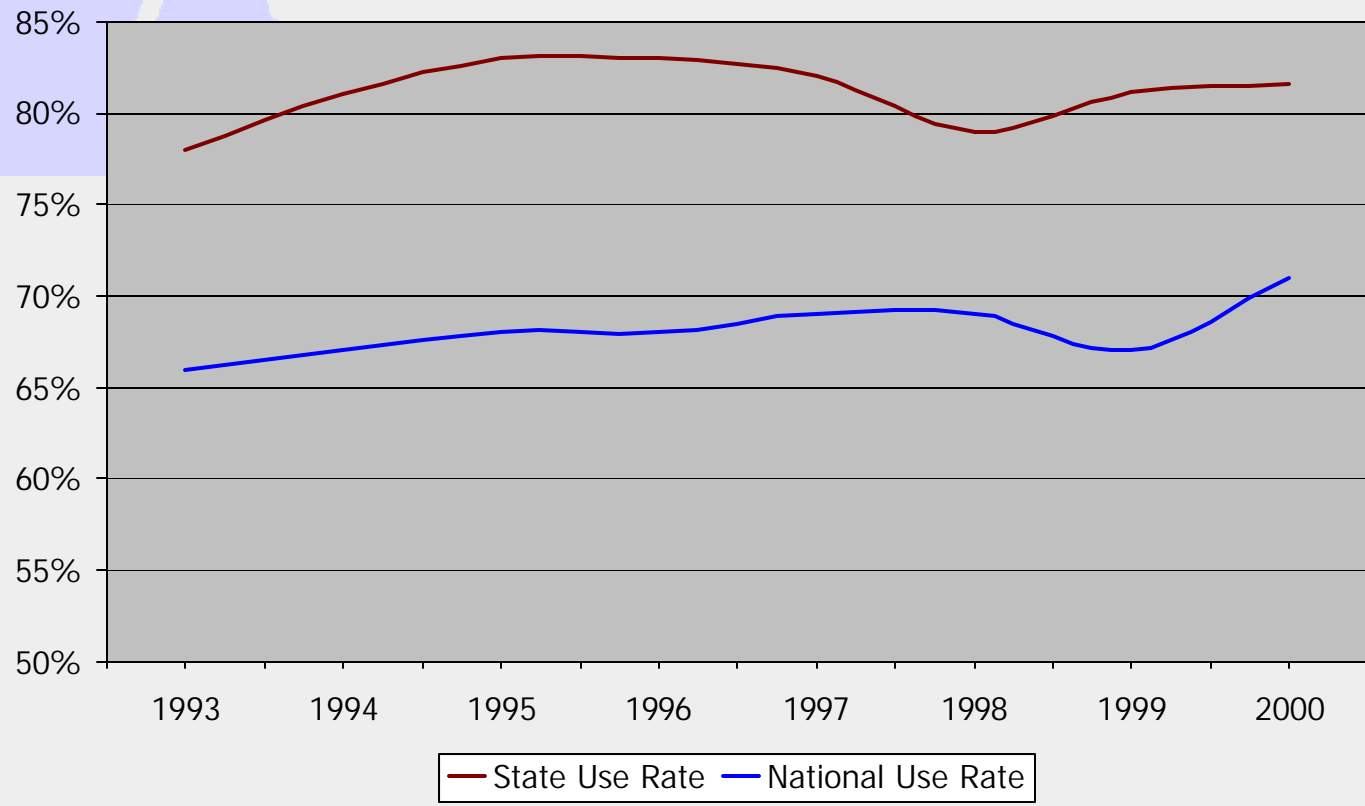
Washington Traffic Fatalities

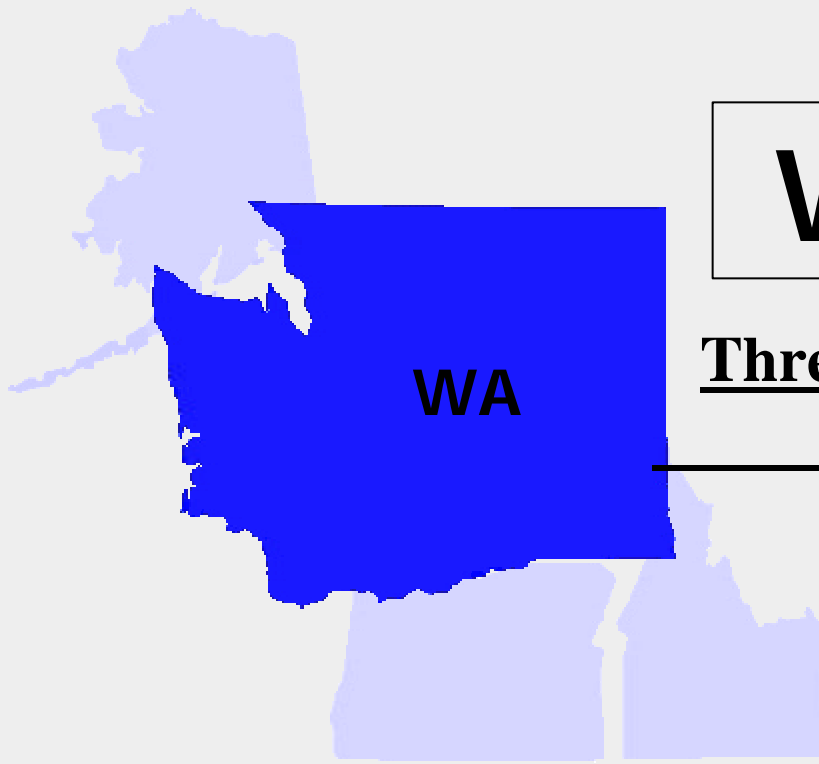




WASHINGTON

Washington Restraint Use Rates





WASHINGTON

Three Flags (B.C., WA, OR)

International Law Enforcement
Occupant Protection Program

Two officers from each jurisdiction in the state attend. Saturation patrols, PSA taping, guest speakers on seatbelt topics_

(150) July 1999 - CIREN Intro., case reviews, AIS, Restrained vs. Not restrained

(150) July 2000 - CIREN and Pediatric injuries (Rivara)



WASHINGTON

CIREN Collision Investigation Training

Sponsored by Washington Traffic Safety commission, Criminal Justice Training Center and HIPRC/CIREN.

All Law Enforcement Detectives/Recons or Techs. statewide

(130) June 2000 - 2 days training sessions on Kinematics and injury mechanisms

(60) June 2001 - One full day training, focus on cases reviews

June 2000 Collision Investigation Evaluation

[illegible]

			Presentation					Apply this in your job							Overall					
			1	2	3	4	5	4-5	1	2	3	4	5	4-5	1	2	3	4	5	4-5
#1 CIREN Introduction/Update			No Rating					No Rating							No Rating					
Speaker: Rob Kaufman																				
#2 Occupant Kinematics Review and Airbag Technologies Update			0%	4%	15%	42%	38%	81%	0%	0%	8%	58%	35%	92%	0%	0%	15%	50%	35%	85%
Speaker: Rob Kaufman																				
#3 Side Impacts w/ case reviews			0%	0%	4%	46%	50%	96%	0%	0%	4%	50%	46%	96%	0%	0%	4%	46%	50%	96%
Speaker: Rob Kaufman																				
#4 Frontal Offset FLEE/SUV			0%	0%	8%	42%	50%	92%	0%	4%	8%	35%	54%	88%	0%	0%	12%	36%	52%	88%
Speaker: Rob Kaufman																				
#5 MATYMO simulations and Cervical Spine injuries			4%	0%	15%	42%	38%	81%	8%	4%	27%	27%	35%	62%	8%	0%	15%	42%	35%	77%
Speaker: Alan Tencer & Rob Kaufman																				
#6 No Belts About It. Belt And Bags			0%	0%	10%	43%	48%	90%	0%	0%	5%	48%	48%	95%	0%	0%	0%	52%	48%	100%
Speaker: Rob Kaufman																				
#7 Children and Crashes			0%	0%	0%	33%	67%	100%	0%	0%	0%	44%	56%	100%	0%	0%	0%	44%	56%	100%
Speaker: Rob Kaufman																				
Did you attend last year's training?																				
YES			19%																	
NO			81%																	
			1	2	3	4	5	4-5												
If yes, did last year's training enhance y crash reconstruction over the past year			0%	0%	0%	80%	20%	100%												
If no, will today's training enhance your investigations?			0%	0%	10%	33%	57%	90%												



WASHINGTON

Washington State Patrol Division Tech Trainings

Quarterly Tech training for troopers

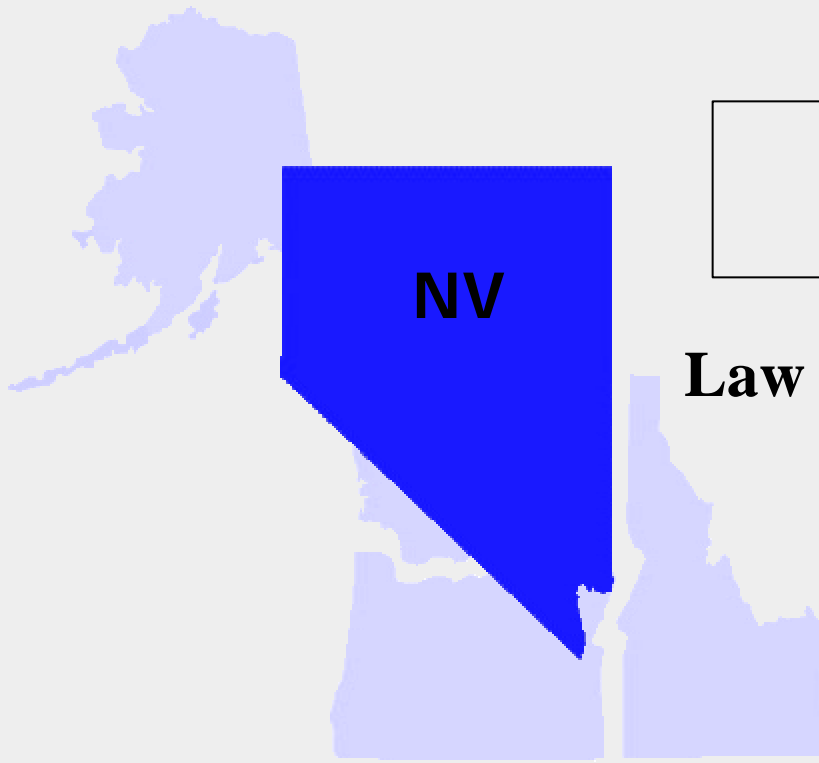
Basic scene documentation/speed calc.

(50) July 2000 - Single day training, CIREN intro, injury mechanisms, case review, kinematics

(50) July 2001 - Repeat training conducted in June for state

Washington State Driver Impaired Conference

(75) December 2000 - Alcohol related cases, Crash Course in Kinematics



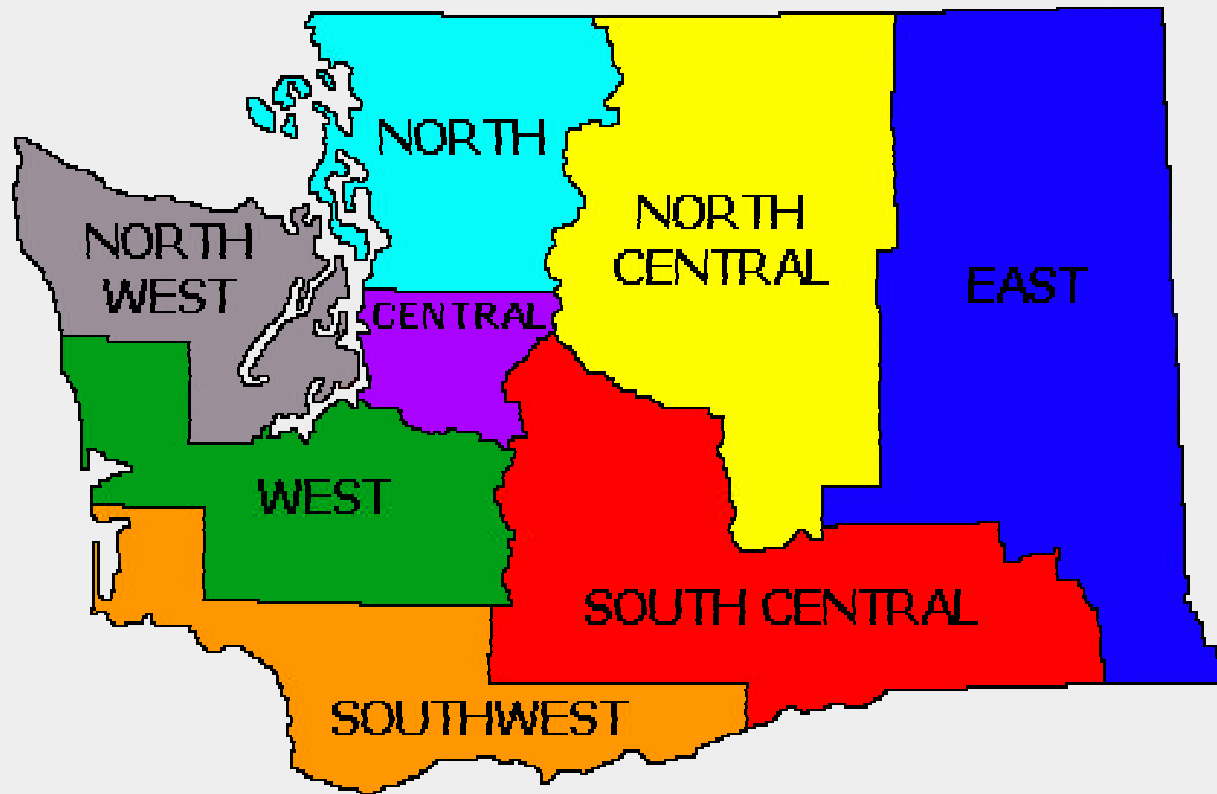
NEVADA

Law Enforcement - Buckle Up Summit

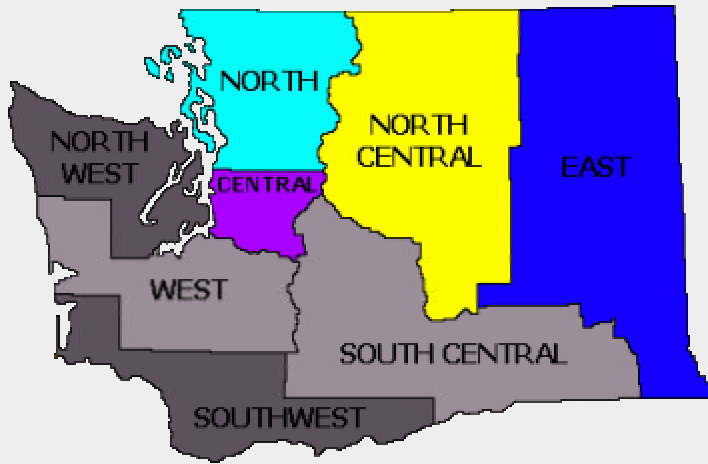
**Fall 2001 - Interest in CIREN outreach
through Washington Traffic Safety
Commission**

WASHINGTON

State Regional EMS



WASHINGTON State Regional EMS



Annual Regional EMS conferences offered to meet CME credits. One and two day events with numerous topics and workshops

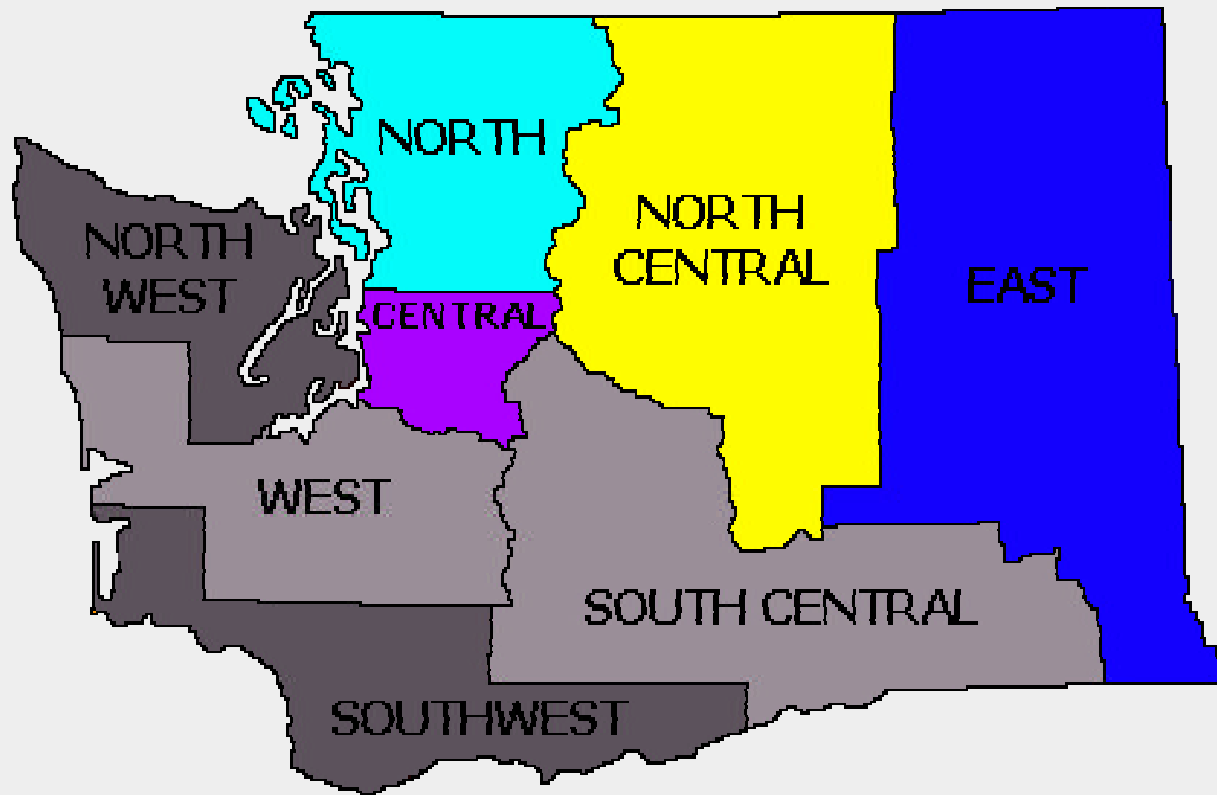
East (300-ballroom) August 2000 Statewide EMS conference - 2 hrs.
CIREN, Kinematics for Dummies, AIS , Bad to Bone (96% E,G)

North Central (60) April 2000 - CIREN intro, Kinematics - 1.5hrs

North (100) April 2000 - Kinematics, restraint tech, Bad to Bone, rotational forces

WASHINGTON

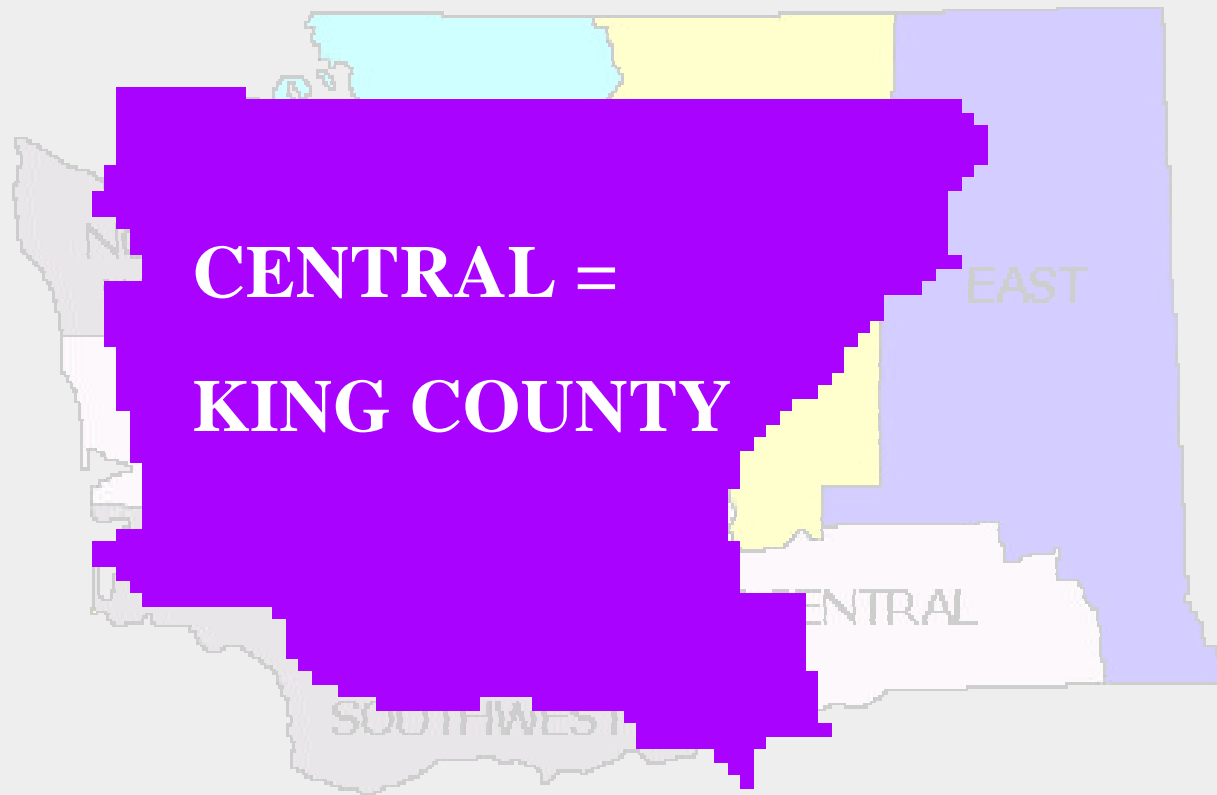
State Regional EMS

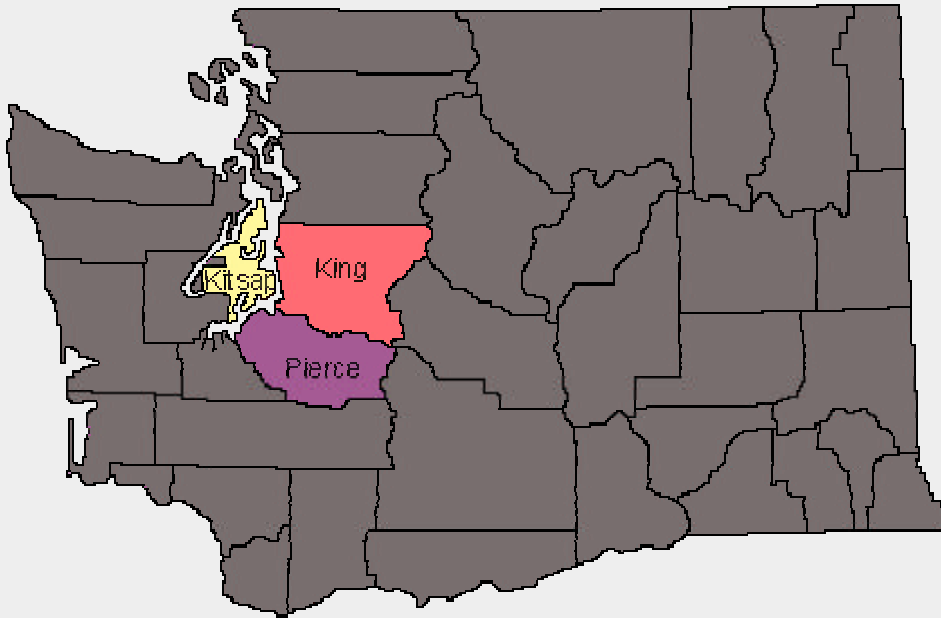


Invited to speak within the next year in West and South Central

WASHINGTON

State Regional EMS





Kitsap County

(50) Feb 2001 - EMS/Fire Rescue
CME training - CCK and B to B

Pierce County

(75) May 2001- EMS/Fire Rescue
CME training - CCK , Restr. Tech

King County / CENTRAL EMS Region

(150) April 1998 - CIREN Intro, Case Reviews, Injury Mechanisms

(150) January 2000 - CIREN, Crash Course in Kinematics, Bad to the Bone, Assessing severity and Injury Patterns

King County Medical Examiners - July 2000, August 2001

King County Traffic Coalition - Sept. 2000, March 2001

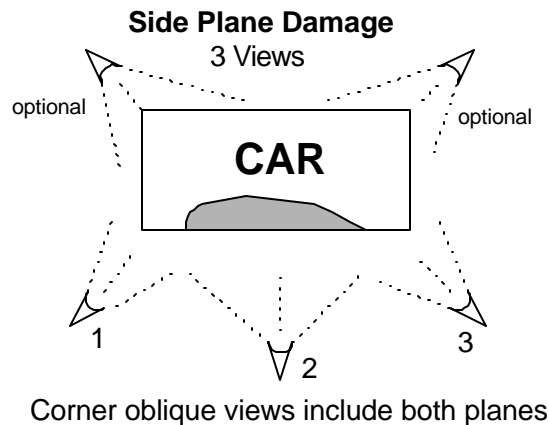
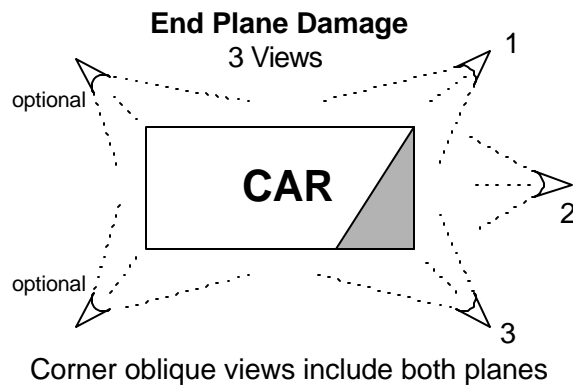
King County Medic One Digital Camera Project



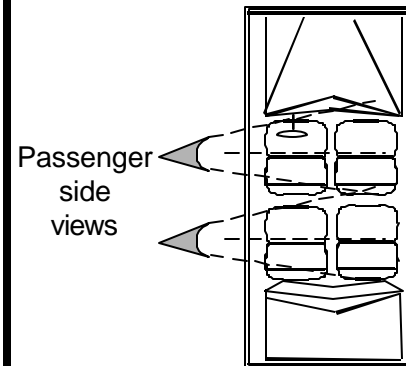
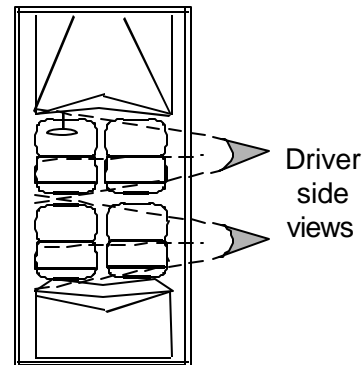
- 22 Digital Cameras on all Medic One and MSO units
- Seattle Medics trained locally at HMC base
- County Medics develop a Cdrom movie for training the rest of the county medics
- Training conducted for photography protocol and how to assess injury patterns based on INTRUSION = INJURY



King County Medic One Digital Camera Project



Occupant seated locations Photo from opposite side





King County Medic One Digital Camera Project

Medic One units trained to assess injury severity and photography protocol at Jan. 2001 Regional Meeting

Floppy disks brought into HMC Resus #2 where a 20" TV monitor with another camera is located for slide show viewing.

(50) June 2001 -Trauma Conference / Surgeons Weekly training conference

Trained all Nurses, ED staff, Trauma Surgeons

“How to assess the severity and injury patterns of MVC”

Emphasis on INTRUSION = INJURY, side and frontal impacts

Seattle CIREN

Hospital Outreach Events

Harborview Medical Center

- Staff meetings, Coffee Talks, Brown bag
- Board Meetings

Children Hospital - Grand Rounds/CIREN intro

Good Samaritan/Pierce County Level II

Overlake/King County Level II - Medic, ER training

Emmanuel Legacy Level I in Portland, OR - 3 hour

CIREN Seattle



**Taking the Knowledge to
the World**





CIREN Seattle

**Taking the
Knowledge to
the World**



Ghana, Africa - Bus vs. Truck Crash



CIREN Seattle

**Taking the
Knowledge to
the World**

One of the leading causes of death in third world

Road safety efforts, minimal

CIREN type research needed

Thank you